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Veröffentlichungsversion / Published Version
Arbeitspapier / working paper

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:
SSG Sozialwissenschaften, USB Köln

Empfohlene Zitierung / Suggested Citation:
Fuchs, D., Glaab, K., Kalfagianni, A., & Meyer-Eppler, R. (2010). *Retail governance and agrifood sustainability: insights and research needs.* (Sustainable Governance Discussion Paper, 01/2010). Münster: Universität Münster, FB Erziehungswissenschaft und Sozialwissenschaften, Institut für Politikwissenschaft. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-257461

Sustainable Governance Discussion Paper 01/2010

Retail Governance and Agrifood Sustainability: Insights and Research Needs

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Münster, November 2010

Sustainable Governance Discussion Paper ISSN 1868-4203

Publisher: Chair of International Relations and Development Policy

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Contents

Abbreviations and Acronyms

ACP	Africa, Caribbean, and Pacific Group of States
BSE	Bovine Spongiform Encephalopathy
CAP	Common Agricultural Policy
CoC	Codes of Conduct
CSR	Corporate Social Responsibility
EC	European Commission
EEC	European Economic Commission
EFSA	European Food Safety Authority
ELO	European Landowners' Organization
ERRT	European Retail Round Table
EU	European Union
FAWC	Farm Animal Welfare Council
FCRN	Food Climate Research Network
FFA	Forum for the Future of Agriculture
FOM	Farmer Ownership Model
GAP	Good agricultural practice
GDA	Guideline daily amounts
GHG	Greenhouse Gas
GlobalGAP	Global Partnership for Good Agricultural Practice
GM	Genetically Modified
GMO	Genetically Modified Organism
GTZ	German Society for Technological Cooperation
HACCCP	Hazard Analysis and Critical Control Points
IFAP	International Federation of Agricultural Producers
IFOAM	International Federation of Organic Agriculture Movement
KRAV	Association for Control of Organic Production
NPOP	(Indian) National Programme for Organic Production
NSOP	National Standards for Organic Production
REAP	Retailers' Environmental Action Programme
SCP	Sustainable consumption and production
UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme

1 Introduction

Food security, food safety, healthy consumption habits, and environmental sustainability are essential to the well-being of societies worldwide. Yet, progress in fostering sustainability in the global agrifood system has been slow at best and significant challenges remain. First, food insecurity remains a problem for millions of people, while its range and consequences have been aggravated by the recent food crisis (FAO 2008b). Second, repeated food scandals and health scares constitute additional challenges for food governance (World Bank 2005). Food is the number one cause of premature death in the western world due to the increasing consumption of fattier, saltier, and sweeter foods and drinks (Popkin 2002). Even in many Asian countries obesogenic diets are becoming more prevalent (Florentino 2002; IOTF 2005). Third, threats to the provision of adequate amounts of nutritious food are expected to multiply as a result of climate change (European Commission 2008a). At the same time, the food sector itself is a major contributor to direct and indirect greenhouse gas emissions (FAO 2008a). Fourth, alternative food products – while promising environmental and health benefits in relation to their conventional equivalents – are also associated with costs. In India, thousands of farmers have reportedly committed suicide, partly as a result of debt due to unfair biotech deals (Nagaraj 2008).

Apart from the severe challenges facing the global agrifood system, there has also been a major structural transformation in its governance. Specifically in the past decades, governance capacities and functions in global agrifood governance have shifted, with retail food corporations becoming key players in this field. Their new role has resulted from two main developments: First, retail corporations have experienced tremendous growth in size and reach, a factor which has strengthened their strategic position in the market (Burch, Lawrence 2005). By now, the agrifood sector is dominated by transnational corporate actors that have established oligopolies in almost all segments of the system. Second, the role of government has shifted to one of oversight rather than control (Henson, Reardon 2005). More precisely, political capacity and functions have shifted from state to non-state actors in the context of globalization and the popularity of neoliberal norms (Graz et al. 2008). As a consequence of these developments, retail food corporations are in a position to design and private governance institutions. By private retail governance, we mean the specific instruments used by retail corporations to manage the types and quality of products they sell, as well as production processes. This includes, for example, certification and labeling programs, standards, and codes of conduct. Retail corporations also shape production and consumption practices through the development of *de facto* mandatory private standards, 'own-brand' products, and a substantial expansion in farm-to-shelf control

(FAO 2006; Burch et al. 2007). As a result, retailers have been described as the "new food and lifestyle authorities" next to the traditional authorities of government, church and professional bodies (Dixon 2007).

Given the numerous challenges facing the global agrifood system, the question of how more sustainable practices can be brought about is a crucial one. Therefore, this paper provides a preliminary inquiry into the effect of private retail governance on sustainability issues. If private food governance institutions promote some sustainability issues, but disregard others, we need to know which facets of sustainability are likely to trump, and which need additional public governance efforts or adjustments in existing public and private governance institutions.

In pursuit of this objective, the paper analyses four different but interrelated questions:

- What is the impact of retail governance on farmer livelihoods and food security?
- How does retail governance shape the sustainability of consumer lifestyle choices?
- How effective is retail governance in addressing climate change objectives?
- How does retail governance shape the sustainability of the global agrifood system with respect to alternative foods?

Clearly, the broader impact of retail governance on the sustainability of the global agrifood system is too great to be fully explored in the context of a single paper. Indeed, in this paper, we aim to raise attention for the relevant issues, provide first insights, and, thereby, define questions for future, more in-depth research.

In terms of providing empirical evidence, we primarily focus on the EU and to a lesser extent Asia in particular, as they are examples of important and yet different actors in the global agrifood system. Farmer livelihoods are a major source of political conflict in Europe, especially in the era of retail concentration. Likewise, food scares and scandals frequently occur in the EU, or reach the EU from abroad. Unhealthy diets also are a major cause of health problems among the European population. Moreover, the EU urgently needs to address the climate change implications of the agrifood sector, if it aims to make continued progress in reducing greenhouse gas emissions. Furthermore, the EU has shown particular interest in alternative foods and has the largest and most sophisticated organic market globally (Organic Monitor 2006). Finally, amidst controversy, the EU has recently allowed the cultivation of two GM food products, corn MON 810 and Amflora potato, as well as granting member states greater freedom to decide on the cultivation of GM crops (European Commission 2010b).[1] At the same time, European retailers have gained a central role in EU and global food governance. Seven out of the top ten global

[1] http://ec.europa.eu/food/food/biotechnology/index_en.htm

retailers are European and at the forefront in the development of private standards (Fuchs et al. 2009). The significance of retailers in food governance is also recognized by the EU (EEA 2009), which has launched a Retail Forum aiming to foster sustainable production and consumption practices (Retail Forum 2009).

Asia, in turn, is one of the world's most populous and fastest growing regions. It is a major producer and consumer of agricultural products, especially in the context of rising incomes in the emerging markets. Simultaneously, it is home to extremely poor rural populations striving for food security, and faces serious environmental challenges and food safety concerns. In addition, China and India have become major political players in this multipolar world, whose cooperation more than ever is going to be necessary to achieve effective global governance. The study of agrifood challenges in Europe and Asia and corresponding knowledge exchange between the two regions, then, has undeniable benefits for both governments and citizens. At the same time, however, scientific studies of relevant developments in Asia are extremely rare so far. Thus, our analysis is only able to pinpoint a few interesting developments at this point.

While the existing literature has paid considerable attention to the globalization of the agrifood system as such and has begun to look at the role of corporations in this system (Clapp and Fuchs 2009), empirical research on the broader impact of food retail governance is just starting to emerge. Here, we draw attention to relevant sustainability issues and present first insights into four aspects of the impact of retail governance on agrifood sustainability. We proceed as follows: The next section presents our analytical perspective and provides more information on retail governance and retail power. In addition, it discusses the interaction between public and private food governance. Sections three to six present the analyses of the four questions raised above. Each section includes a brief discussion of the relevant background, an analysis of the state of the art in the literature, an overview over relevant current retail initiatives, and an inquiry into the interaction between public and private governance, followed by a short conclusion. Section seven discusses the role of gender in retail governance's implications for sustainability, focusing on the issue of climate change in particular. Finally, the eighth section summarizes the paper and lays out some ideas on further research and policy needs.

2 Framework

2.1 Retail Governance and Retail Power

Agrifood governance, i.e. the rules and institutions that govern the production, trade, and marketing of food and agriculture, is being transformed. Traditionally the domain of governmental and intergovernmental actors, the governance of food and agriculture is increasingly being not just influenced, but also 'created', by private actors via private governance mechanisms, such as standards and corporate social responsibility initiatives. Retail food corporations, in particular, have become key players. This role has resulted from two main developments.

First, it is a function of a tremendous growth in retail size, reach and concentration that took place in the last decades, as well as their strategic position in the market (Burch, Lawrence 2005; Konefal et al. 2005). At the moment, there are ten large internationally operating supermarket chains whose market share is constantly increasing. In the United States, for example, the five largest supermarket chains have almost doubled their market share between 1997 and 2005, from 24 to 42 percent (Morgan et al. 2006). In the EU, the top five retailers control more than 70 percent of the groceries retail market on average (PlanetRetail 2006). In individual countries, concentration is even higher. In Finland, for example, the top five retailers control 90 percent of the market, while concentration is between 70 and 80 percent in Sweden, Ireland, Slovenia, Estonia, Austria, Germany and France (PlanetRetail 2006). Concentration is also high in developing countries. Reardon and colleagues report that in Latin America the top five chains per country control 65 percent of the supermarket sector (Reardon et al. 2004).

These trends and numbers reveal a degree of economic power that cannot be ignored. In Europe, in particular, retailers are increasingly able to dictate prices for their suppliers (see Fuchs, Kalfagianni 2010a). More specifically, while in the late 1950s farmers received half the retail price of food, this has now slumped to 7 percent in the UK and 18 percent in France (European Parliament 2009). UK potato producers, for instance, are reportedly paid £44.81 per ton of standard white potatoes, while shoppers are charged an equivalent of £724.25 a ton (Uhlig, Foster 19.09.2002). In Ireland, while profits from supermarket milk have increased by €150 million as a result of double-digit percentage rises in food prices in 2007, farmers received less than a third of the gains (Thanassoulis 13.06.2008).

Political implications can also be identified. The dominance of a few corporations in a vast range of market segments fosters their ability to limit the choices available to actors,

specifically suppliers and labor, who desire entry. In the context of oligopolistic market structures, more specifically, access becomes conditional on the prior acceptance of retail rules and standards. Likewise, retailers can constrain policy choices of formally empowered decision-makers by rewarding or punishing countries through the relocation of investments and jobs. In other words, retail market power is translated into structural power, changing the patterns of inclusion in and exclusion from the global economy as well as relations of domination and control (see Fuchs 2005; Sklair 2002).

Second, the role of government has shifted to one of oversight rather than control (Henson, Reardon 2005). Indeed, governments increasingly delegate authority to the private sector. The EU General Food Law, for instance, explicitly places responsibility on the private sector stating that food business operators should have "primary legal responsibility for ensuring food safety" (cited in Humphrey 2006, p. 579). This regulation further demands that food business operators should "actively participate in implementing food law requirements by verifying that such requirements are met" (Humphrey 2006, p. 579). This development reflects a general trend in governance, as political capacity and functions shift from state to non-state actors in the context of globalization and the dominance of neoliberal norms (Graz et al. 2008).

As a consequence of these developments, retail food corporations are in a position to exercise governance, i.e. to structure and direct the behavior of actors in their supply chains (and beyond) on the basis of private rules and standards. Standards are agreed criteria by which a product or a service's performance, its technical and physical characteristics, and/or the process and conditions under which it has been produced or delivered, can be assessed (Nadvi, Wältring 2002). These mechanisms differ in how much attention they pay to sustainability issues, the stringency of standards as well as the strictness of monitoring and compliance methods. Importantly, for the reasons outlined above, retail governance mechanisms acquire a *de facto* mandatory nature for all other actors in the supply chain (McEachern, Warnaby 2004).

With these private governance mechanisms, then, retailers increasingly are involved in the design, implementation and enforcement of rules and principles governing the global food system at various points from inputs to production to sale. From a sustainability perspective, private governance mechanisms developed by retailers claim to foster practices that promote greater safety and quality of food products as well as improvements in the environmental and social conditions of the food system. Accordingly, this report will explore the role and relevance of retail governance mechanisms in addressing core sustainability challenges in the food sector, specifically food security, unsustainable lifestyles, climate change concerns and the development of novel food products, with a focus on the EU and Asia.

While retail governance is the common underlying framework, our four research questions are pursued distinctively, elaborating different perspectives. Thus, the inquiry into links between retail governance and food security emphasize questions of the power and legitimacy of private rule. The exploration of the influence of retail governance on consumer lifestyle choices stresses issues of communication management and marketing techniques. The effectiveness of retail governance in addressing climate change objectives is discussed with a focus on rational institutionalism while integrating perspectives from organizational theory. Finally, the investigation of the retail governance of alternative foods underlines the role of processes of deliberation, competition and confrontation between retailers and other stakeholders, such as governments, consumers and supply chain actors.

2.2 Interaction of Private and Public Governance

In spite of a rise in the amount and reach of private governance mechanisms, the global agrifood system remains a heavily regulated subject area in most countries. For this reason, the analysis of private retail governance needs to be complemented with an analysis of the wider public regulatory regime. Specifically, we argue that the role and sustainability implications of retail governance also depend on the interaction with public standards and provisions, and the level of regulatory oversight and control.

In the EU, for example, over 80 legal acts and a number of labeling provisions cover the Common Market Organization for agricultural products, while specialized bodies (e.g. the European Food Safety Authority) have been created to provide scientific advice and communicate vital information on food products and processes. The Common Agricultural Policy (CAP) is the most integrated EU policy, while the preservation of the fabric of rural communities and livelihoods remains a priority of public governance. Today, regulations established in pursuit of food security and trade policy objectives as well as sustainability objectives (e.g. farm hygiene and food safety, animal health and welfare, or biodiversity conservation) form a web of public agrifood governance. Accordingly, private retail food governance is embedded in a wider frame of public regulation.

Simultaneously, retailers have assumed an increasingly important role within public regulatory bodies. This is especially evident in the EU where retailers, via their umbrella organization Eurocommerce, have acquired Board representation within the European Food Safety Authority (EFSA) (Flynn et al. 2003). The EFSA is an organization created in the aftermath of the Bovine Spongiform Encephalopathy (BSE) crisis with the aim to provide "independent scientific advice and clear communication of existing and emerging (food) crises"

and plays a key role in EU food governance.[2] Flynn et al. (2003) also observe that the articulation of the principles of traceability and Hazard Analysis and Critical Control Points (HACCCP) in and through supply chains and as a way of regulating these supply chains is very much related to the active retail presence in the EFSA.

Consequently, retail governance interacts with public objectives and institutions, while retailers also participate in public structures and institutions. Both positive and negative effects can emerge from these interactions. Positive effects include the potential synergy of efforts between public and private actors in fostering sustainability objectives in the food sector. The EU goal to cut its greenhouse gas (GHG) emissions by 20% by 2020 compared to 1990 levels, for instance, can be greatly facilitated when leading European retailers – whose supply chains are major sources of GHG emissions – adopt similar mitigation targets. Likewise, retail strategies can contribute to public health objectives, such as the lowering of blood pressure, via the reduction in the amount of salt entailed in food produced under their brands. Negative effects, however, can also be identified. These can emerge from conflicting goals between public and private actors as well as from different perceptions and ideologies about the means of achieving public (sustainability) objectives (e.g. via public or private regulation). Accordingly, our analysis will also reflect on the interaction between retail governance and public policy objectives and institutions and the associated implications for sustainability. The limitations of private retail governance and the need for public intervention will also be examined in this context.

[2] http://www.efsa.europa.eu/en/aboutefsa.htm

3 Retail Governance and Sustainable Livelihoods

A large share of the global population is rural and works in agriculture with small scale structures dominating the picture. In vast regions of developing countries, particularly in Asia, small farmers are the core providers of food and income (FAO 2008a). Eighty seven percent of all farms with an area of less than two hectares are located there. For these farmers, food security depends on the ability to earn sufficient income from farming.[3] Due to a lack of social safety nets in developing countries, farmers are often left without alternatives when forced out of agriculture because of their inability to earn a livable income.

In industrialized countries, only a small part of the population works in the agricultural sector. In the EU, this amounts to 4.5 percent of the population (IEEP 2002). Still, farmer livelihoods, and in particular the incomes of small scale farmers are an issue of high political relevance there. While these farmers generally do not have to fear starvation, the subsidization of their incomes by the EU is a highly contested issue, especially in times of empty coffers and increasingly powerful international opposition to Northern agricultural subsidies.

Food retailers impact the income farmers can generate in a variety of ways. Capital concentration in the food retail sector has awarded the remaining food retailers with immense market power. This structural power allows them to exert substantial pressure on producer prices. At the same time, this power has allowed food retailers to set and de facto enforce food standards for their supply chains, thereby raising the costs for producers. In developing countries, the resulting downward trend in farmer incomes has led to a serious threat to food security in rural areas. But even in developed countries, small farmers' incomes are under pressure. As pointed out above, their remaining stability often depends on public support, in particular EU subsidies.

Therefore, retailers' influence on the sustainability of farmer livelihoods in developing and developed countries needs to be critically examined. The next section will assess the state of academic knowledge on the impact of retailers on the livelihood of farmers. Subsequently, some important retail initiatives in this area will be presented and their role with respect to farmer livelihoods discussed. In the following section, we will look at the interaction of public and private governance initiatives with respect to farmer livelihoods and food security. In the last section, finally, we will outline research gaps and further research needs.

[3] Food security as such is a huge issue of course. In the context of this paper, however, we limit our inquiry into food security to an analysis of the impact of food retail governance on the incomes of small scale farmers with little alternative to agriculture. Moreover, we define sustainable livelihoods in terms of the ability of farmers to earn a sufficient income with agricultural production to feed their families.

3.1 State of the Art

As pointed out above, retailers have an influence on commodity chains from farm to shelf these days. They globally source and distribute food on the basis of highly organized supply chains, thereby determining the output and characteristics of global commodity markets (Dolan, Humphrey 2000). This organization is reflected in increased control and the reduction of the numbers of suppliers in trade and in a widening gap between producer prices and retail prices. As shown earlier, the increasing ability of food retailers to govern the global agrifood system results from several factors and developments, including retailers' proximity to consumers as well as the development of new technologies facilitating the organizational and logistic handling of global supply chains. Most importantly, however, was the trend towards capital concentration in the retail food market, which awarded the reaming retailers with immense market power in the last decades. It is the impact of this market power and reach on the sustainability of farmer livelihoods, which raises academic concern (ActionAid 2005; Hatanaka et al. 2005). In developed countries, farmer protests against the downward pressure on prices exerted by large retailers are well known. Recent farmer protests in EU countries have been directly oriented towards supermarkets, which marks a departure from traditional protest culture against public institutions.[4] The bone of contention has been the perceived gap between retailer prices and farmer prices. One can only imagine how powerless small farmers in developing countries are in such a situation. While consumers may benefit from low prices, many producers at the other end of the supply chain stand to lose.

Clearly, some farmers may well benefit from retailers' extension of reach to the "field", i.e. the abolishment of middlemen and the direct integration into global supply chains. Such benefits only tend to accrue to large scale farmers, however, for reasons pointed out below. As Dolan et al.'s (1999) study on Kenyan fresh vegetable trade shows, small farmers (and therefore the majority of farmers in the world) bear the costs of these developments.

> The gains to producers and exporter from the growing fresh vegetable trade have clearly been distributed inequitably. While some have clearly benefited from the move toward direct supermarkets due to increased access to markets and product information, many more producers and exporters have fallen out of the markets (Dolan et al. 1999, p. 23).

Next to the traditional question of how much market power food corporations wield on farm gate prices, however, the new trends in food retail governance exert a powerful influence on the sustainability of the global agrifood system in general and the sustainability of farmer livelihoods in particular. As pointed out above, private retail standards have become a crucial form of retail

[4]Alternatively, farmer protests target public and private actors simultaneously. In an incidence, French farmers dumped fruits and vegetables outside of government buildings and asked political decision makers to address the problem that supermarkets chains underpaid them Tallontire, Vorley 2005.

governance today, and include standards relating to hygiene and safety and, to a lesser extent, also standards relating to environmental and sometimes social aspects of food production. Most fundamentally, these standards impose documentation requirements, certification schemes and demand changes in practices, which results in higher production costs and can force small producers out of business, if they cannot afford to implement the new private standards (Fuchs et al. 2009).5 Importantly, small scale farmers frequently lack access to credit, while carrying a burden of large fixed costs. At the same time, retailers' pressure on prices prevents the possibility of farmers getting compensated for these higher production costs. Overall, risks and costs are passed on to the farmers, while retailers capture a large share of the profits (Brown 2005, p. 11).6

Besides the general problems for farmer incomes generated by retail food standards, segmentation and differentiation among private standards create further difficulties and dependencies. According to Vorley, these harmful effects are due to the organization of the agrifood system as a largely buyer-driven chain that is characterized by a high degree of vertical coordination between producers, suppliers, processors and retailers (Vorley 2003, p. 22). This leads to market segmentation and a shortening of the supply chain in so far as producers contract with retailers to deliver differentiated products. These direct contracts cover such issues as quality, quantity and price premium. They also are associated with issues such as the question of who is an accepted certifier. The resulting dependency leaves producers with little negotiating power, since they need the specific retailers to buy their produce (von Schlippenbach, Teichmann 2009, p. 151; Vorley 2003, p. 23).[7]

Furthermore, the trend towards retail governance in the form of certified standards and supply chains with appropriate opportunities for monitoring and enforcement has furthered the interest of retailers in contracting with large scale growers. The wish to obtain large quantities produced according to the same quality standards while following strict timetables leads to a preference for large growers by supermarkets and exclusion of small growers. In sum, the new governance architecture of the global agrifood system disadvantages small-scale farmers in a number of ways.

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[5] One should not demonize the standards set by global retailers and assume that local or regional retail chains are the panacea in comparison, of course. As Berdegué et al. 2003 point out local supermarket standards in Latin America affect local producers just as much as those standards set by foreign supermarkets. The local supermarkets in Latin America also tend to acquire products from medium to large farms only, and the adoption of quality and safety standards complicates the situation of small farmers as well Berdegué et al. 2003.

[6] Illustrating the more extreme facets of an exercise of retail control over suppliers, Fearne and Hughes refer to the case of the "Tesco 'hit squad', empowered to call on any supplier, day or night, to test their compliance systems" Fearne, Hughes 1999, p. 122.

[7] For instance, Hatanaka et al. 2005 cite the case of the British retailer Safeway, who required its suppliers to become certified by one of their approved certifiers, if they wanted to continue doing business with Safeway.

Clearly, private retail governance in form of food quality standards has positive implications as well. Thus, such standards have the potential to increase food safety for consumers. Similarly, they may lead to some improvements in the environmental characteristics of food production, although these improvements tend not to be as comprehensive and strong as the advocates of private retail governance would like us to believe (Fuchs et al. 2009). Thus, some scholars argue that the standard system of GlobalGAP has had positive implications in terms of increasing credibility in global markets and in a reduction of pesticide use (Hatanaka et al. 2005).

Moreover, private retail governance can under certain circumstances work for the benefit of even small scale farmers (Henson, Humphrey John 2010). However, these circumstances require specific efforts by a range of actors and do not come about automatically. In a recent special volume of *World Development* on 'Agrifood Industry Transformation and Small Farmers in Developing Countries', some of the papers reveal positive effects of retail governance on small farmers, such as their inclusion in modern channels, positive effects on incomes and assets of farmers, as well as positive implications for the local labor markets (Reardon et al. 2009). In a case study on small farmer production of vegetables in Madagascar, Minten et al. (2009), for instance, demonstrate that small farmers can benefit from integration in global value chains. They found that given the right incentives and contracting systems – micro-contracts, intensive farm assistance and supervision programs to fulfill the quality requirements – global retail companies can have positive impacts on developing countries. Likewise, Boselie et al. (2003) find that small producers can participate in supply chains to supermarkets in a way that enhances their livelihoods, if public and private sectors promote their participation in sustainable production. Similarly, Perez-Aleman and Sandilands (2008) point to a 'bottom-of–the-pyramid'-strategy in which a global food retail corporation proactively supports local suppliers in the adoption and localization of standards which should help to achieve social and environmental upgrading. Without such external support, however, small farmer incomes tend to be threatened, if not destroyed, by private retail standards.

Scholars have engaged with the impact of large retailers on small farmers, often using a case study approach (for an exception, see the recent article by Henson and Humphrey2010). Many studies focus on African fresh vegetable trade or small-scale production in South-America. Only very few and recent studies have analyzed the link between small farmers and supermarket chains in the Asian region (Miyata et al. 2009). However, Asia rapidly grows in importance for food exports and supermarket diffusion. For instance, in the fresh fruit and vegetable sector, Asia has seen a significant increase in its production and exports to retailers (von Schlippenbach, Teichmann 2009). Likewise, the impact of retail governance on farmer livelihoods has not been

analyzed on farmers in developed countries, in particular Europe. Thus, there is a lack of research, both with respect to regions and with respect to more systematic and comparative inquiries that go beyond the scope of individual case studies.

3.2 Current Developments in Retail Initiatives

One can hardly imagine any retail governance initiative that would not impact the sustainability of farmer livelihoods. In consequence, this section will primarily concentrate on the GlobalGAP, as this initiative has made a particular effort to address the criticism that small farmers from developing countries suffer from the implementation of its standards.

GlobalGAP developed out of the EUREP-GAP food safety standard, which was initiated by the Euro-Retailers Produce Working Group (EUREP). The EUREP-GAP standard was already being criticized for favoring large producers due to its neglect of local conditions and its imposition of high audit costs that prove to be a barrier to market entry. Vorley and Fox (2004, p. 19) showed that the required annual farm audit costs of €450 would absorb 70% of the profits of a grower in Ghana. Likewise, while Henson and Humphrey identify some positive outcomes of GlobalGAP for small farmers, their overall assessment is that "GlobalGAP does not make economic sense" (Henson, Humphrey 2009, p. 30) from the small farmer perspective. Fundamentally, it needs to be acknowledged that GlobalGAP, like the other standards mentioned above, includes primarily standards relating to food safety. Moreover, there is some attention to environmental issues and ever less to worker welfare issues. Nothing in the GlobalGAP system, however, addresses the sustainability of farmer livelihoods or minimum levels for farm gate prices.

As a reaction to criticisms of the standard and its effect on smallholders, in 2007 GlobalGap started a project to provide more opportunities for African smallholder representation in the standard setting process.[8] In addition, it implemented the option to obtain a joint certification as a farmer group to help small farmers shoulder the costs of the certification process. These developments will require further observation and analysis to assess their impact on the sustainability of farmer livelihoods.

In other instances, the support of research institutions seems to have positive effects. Michigan State University's Partnership for Food Industry Development (PFID) Project, funded by the US Agency for International Development (US AID), is an example of a program that tries to bring farmers and supermarkets together and brings benefits for both. This partnership helped to connect South African small producers with Pick'N Pay, the country's second largest

[8] http://www.africa-observer.info/ (28-4-2009)

supermarket chain. When farmers agree to participate in a three-year growing project, Pick'N Pay sets the terms of the production and the PFID project offers technical and organizational assistance (Fritschel 2003).

Likewise, retailers have started a couple of initiatives to engage small farmers in developing countries and support farmers in Europe. Thus, retailers have tried to improve the inclusion of small farmers in the supply chain by paying them higher prices for their products (Minten et al. 2009; Miyata et al. 2009). In Germany, for instance, some retail chains increasingly market local dairy products, which require higher farm gate prices, but also promise higher profits (Winter 23.09.2010).

It seems that there are both new initiatives and increasing efforts by existing retail governance institutions to reduce the detrimental impact of retail standards on farmer livelihoods. Yet, we hardly have any comprehensive and systematic insight into the effects of these programs. At the same time, the evidence we have on the potentially dramatic marginalization of small farmers in agricultural markets due to the expansion in private retail governance still is incomplete. The predominance of individual case studies and the exclusion of important world regions from previous studies means that more systematic and comparative research is needed in this field. In consequence, the following questions can be identified as relevant foci for further research:

- What is the impact of retail governance on small farmer livelihoods in Asia and how does it compare across developing countries and regions?
- What is the impact of retailers on the sustainability of small farmer livelihoods in developed countries, especially Europe?
- How effective are (in particular retailers') initiatives to support the sustainability of small farmer livelihoods?

3.3 Interaction of Public Governance and Retail Governance for Food Security

As shown above, retail governance often has unfavorable effects on the supply side, but at the same time public governance has also hurt small farmers abroad. After all, the EU supports its agricultural sector through its Common Agricultural Policy (CAP), which absorbs about 45 per cent of the total EU budget (IEEP 2002). The subsidies paid to farmers under the CAP create substantial asymmetries in production costs between European farmers and farmers in developing countries. In the past, they also led to overproduction in the EU and to 'dumping', i.e. the export of excess production below market prices to developing countries. Although this agricultural protection policy aims at strengthening European small-scale farmers, it is believed to

support the large industrialized farming sector and clearly has negative impacts on developing countries' markets.

Besides the issue of subsidies, food standards set by the EU have also traditionally had an impact on farmers in developing countries. Likewise, EU regulations such as on organic food, which require suppliers to certify their food products, put many obstacles to producers in developing countries (Barrett et al. 2002). In sum, the pressure on farmer incomes in developing countries is not a new development associated with private retail governance. Yet, the dramatic expansion in retail governance in combination with capital concentration in the retail sector further threaten the livelihoods of small farmers, who have increasingly less negotiating power and therefore lack the ability to be compensated for higher production costs and cannot provide the large, standardized quantities of food sought by global retail chains. In other words, these developments are ongoing and reinforce a negative trend.

Public and private governance can hardly be seen as separate entities with regard to farmer livelihoods. There is a dynamic interchange between public and private sectors, especially when it comes to the creation and adoption of food standards. Public governance such as the EU General Food Law in fact called for private traceability and control schemes. Likewise, Henson and Humphrey (2009) find that the Codex Alimentarius has had a role in guiding the development of private standards. Thus, it is usually the public mandatory standards that "lay down the basic parameters of a food safety system, while private standards elaborate on what this system should 'look like' in order to be effective" (Henson, Humphrey 2009, p. IV). Moreover, critical scholars point out that there is a huge imbalance within Codex in favor of food industries as representatives on government delegations, which raises the question whether the interests of developing country producers may sometimes even be heard better in private standard systems (Henson, Humphrey 2009, p. 40).[9] Finally, the public sector has increasingly been criticized for withdrawing from commodity market governance, allowing the governance gaps left by public actors to be filled by private governance institutions (Graz et al. 2008). Vorley points to the relocation of risk to the farmer in this context, since the withdrawal of the state from direct involvement in commodity markets "exposes producers and labourers to price fluctuations without the traditional safety nets of credit and state trading institutions" (Vorley 2003, p. 22).

While the public sector has been a facilitator of private retail governance, it also can address the problem of the impact of retail governance on small farmer livelihoods. Several scholars examine the possibility of supporting small farmers in the context of the rise and

[9] As Vorley points out: "At one key meeting in 2002, 71% of developed countries were represented, but only 18% of developing countries. There were 95 government delegates (43% of participants) and 90 industry delegates. The majority of industry delegates were on government delegations" Vorley 2003, p. 26.

expansion in retail governance with the help of regulatory interventions. Gibbon argues that regulatory interventions by public authorities can lead to a mitigation of supermarket power, which successfully keeps small-scale producers in the supply chain (Gibbon 2003). More moderately, Reardon et al. argue that governments need to provide assets to small farmers and support their participation in the food economy (Reardon et al. 2009, p. 1726). Other scholars consider that agricultural development programs must "take on the responsibility and challenge of assisting small farmers in making the transition to producing safer and higher-quality produce" (Berdegué et al. 2003). And with regard to standards, von Schlippenbach and Teichmann (2009) suggest that the implementation of uniform public minimum standards would reduce the suppliers' dependence on the retail sector.

There have been a number of efforts to meet criticisms on the impact of private and public regulation in agrifood governance on small producers. The EU itself is increasingly aware of the impacts of their policy and has set up a 'health check' of the CAP. In a resolution on poverty reduction in ACP(Africa, Caribbean, Pacific)-countries, the ACP-EU Joint Parliamentary Assembly takes a critical perspective on EU export subsidies and "calls for the elimination of all EU export subsidies as they are gravely undermining local food production" (ACP-EU Joint Parliamentary Assembly 2007, p. 32.).

Public actors also acknowledge the impact of retailers on farmer livelihoods and try to step in by setting up initiatives aimed at strengthening small farmers. The British government for instance has set up a Competition Commission to assess the power of supermarkets. The Competition Commission 2000 report on UK supermarkets found that supermarkets were misusing their market power and engaged in practices which were detrimental to suppliers (Tallontire, Vorley 2005). The report unearthed 52 ways in which retailers were found to have misused their market power against suppliers. As a result, the Commission recommended that supermarkets should be made to abide by a Code of Conduct, when dealing with their producers. However, when the final Code was published, the Commission was criticized for letting the retail industry emasculate the Code (Vorley 2003, p. 35).

In another vein, public actors are trying to help small farmers directly with organizational, financial and technical support. The UK Department for International Development and the German Society for Technological Cooperation (GTZ) established a Smallholder Consultation/Africa Observer program to assist small farmers in reducing compliance costs in the context of GlobalGAP, for example (Henson, Humphrey 2009, p. 25).

In other instances, global institutions have tried to meet the challenges for small-scale farmers by setting up new initiatives. A UN capacity building initiative (UNEP/UNCTAD

Capacity Building Task Force on Trade, Environment and Development) aims at strengthening East African agriculture by promoting the creation of a regional standard for organic agriculture. Following this strategy, farmers would not have to certify through expensive European companies and be able to reduce certification costs (Brown, Sanders 2007, p. 15). Likewise, the World Bank helped to set up a farmer ownership model (FOM)in Ghana, with five smallholder co-operatives holding a large share of the new founded export company, Farmapine Ghana Limited (Fold, Gough 2008; Takane 2004). However, when the financial and technical assistance provided by the World Bank was phased out, the resulting problems forced smallholders to sell to other export companies again.

Scholars have pointed out that public governance needs to take a stronger role in supporting small-scale farmers and enhancing sustainable lifestyles. However, interaction between public and private governance bodies is also closely linked. The implications of retail governance for farmer livelihoods, therefore, need to be studied with respect to their interaction with public governance objectives and institutions. In consequence, important further research questions can be identified at this point:

- How do public governance institutions strengthen or weaken the impact of retail governance on the sustainability of farmer livelihoods?
- How can public governance support small farmer livelihoods in the context of the current rise and expansion in retail governance?

3.4 Conclusion

Producers seem to be the weakest link in the architecture of the global agrifood system. A large share of the people that work in agriculture are small-scale farmers in developing countries and they are the people that suffer the most from the increase in retail governance that has taken place in the last decades. At the same time, small farmers from the developed world also face difficulties in being incorporated in the supermarket supply chains and achieving sustainable incomes. The International Federation of Agricultural Producers (IFAP) points out that "[m]uch attention has rightly been drawn to the distortions caused by certain types of government policies. However, relatively little attention has been paid to the market distortions caused by the high level of concentration in the input and distribution side of the agri-food system" (Vorley, Fox 2004, p. 11). These market distortions have been aggravated by the expansion of retail standards.

Academic research indicates that retail governance has a great influence on the livelihoods of farmers. While the impact on farmers in developing countries, especially on the African

continent, has been analyzed in a number of case studies, there is little known about the effects on the emerging Asian market. At the same time, the impact of retail governance on farmer incomes in developed countries, especially in Europe, has only inspired little research. Finally, the interaction between public and private food governance deserves further attention in this context. In sum, there is a need to find out more about the impact of retail governance on the sustainability of small farmer livelihoods.

4 Retail Governance and Sustainable Lifestyles

Consumers have a crucial role in the global agrifood system. Certain consumer lifestyles may enforce sustainable or unsustainable consumption and production patterns. Clearly, the achievement of sustainable lifestyles is a major challenge both for the largely overconsuming populations of developed countries (and the developing economic elites in developed countries) as well as for the underconsuming sectors of developing country populations. Such sustainable lifestyles would be "patterns of action and consumption […], which meet basic needs, provide a better quality of life, minimise the use of natural resources and emissions of waste and pollutants over the lifecycle, and do not jeopardise the needs of future generations" (Centre for Sustainable Development 2004, p. 4). In the past decades, lifestyle changes had an influence on consumer health and led to an increase of diet-related diseases in developed countries and even among some of the members of the emerging global consumer class in developing countries. But while consumer choices, for instance in Europe, to pursue unhealthy diets lead to overweight and obesity, in Asia, most countries still have to deal with overnutrition and undernutrition at the same time (Florentino 2002).

Consumers may be increasingly aware that their consumption choices can accelerate environmental degradation and pay more attention to pesticide use and carbon emissions in food production. At the same time, there is perhaps greater attentiveness to the impact of lifestyles on the livelihood of people in developing countries, and consumers may increasingly consider fair labor conditions in and trading relations with developing countries in their purchasing decisions. The willingness and, more importantly, ability of consumers to carry out sustainable consumption choices, however, is strongly influenced by retail governance.

Food retailers play a pivotal role in the willingness and ability of consumers to adopt sustainable lifestyles with respect to food consumption (Fuchs, Kalfagianni 2009; Jones et al. 2005; UNEP 2006a). They pose a vital link between the production and consumption side and have the ability, via marketing strategies and the range of products on offer, to substantially shape consumption choices. The Farm Animal Welfare Council (FAWC) asserts that "it is the retailers who exercise the greatest demand-side influence and who have the greatest power to create awareness" (FAWC 2005). It is therefore necessary to investigate retail governance's relationship with consumer lifestyle choices. This second inquiry, then, takes the opposite perspective to the first one. While the previous section focused on how retail governance impacts producer livelihoods, this section discusses how and what retail governance communicates to consumers in terms of sustainability issues.

4.1 State of the Art[10]

Supermarkets, as the "new food authorities" (Dixon 2007), are the place where consumers take most of their consumption decisions. They shape the sustainability of consumption by promoting certain food products and by offering only certain choices to the consumer. There is general academic and political agreement that retailers are one of the main influences on lifestyles and consumer choices. However, the impact of retail governance on the sustainability of consumer lifestyle choices is contested. This is partly the case, because it is analytically difficult to separate between retail governance, retail marketing, and retail power in this context. In consequence, the discussion below will also address all three aspects. The impact of retail governance on the sustainability of consumer lifestyle choices is also contested, however, because private labels and standards can have both positive and negative impacts on this sustainability.

Retailers shape the sustainability of consumption by promoting food products with particularly sustainable or unsustainable characteristics. They function as a contact point between producers and consumers and thus hold an important position, in which they can provide information on the composition and production circumstances of food products (Durieu 2003, p. 8). Some observers, therefore, see it as the food industry's role to promote proper nutrition, for instance (Florentino 2002, p. 679). They argue that retailers may use their ability to innovate and develop new retail formats as a means to direct consumer behavior and patterns of consumption to sustainability (Clarke 2000, p. 988). Thus, businesses may promote healthy and sustainable food consumptions through sustainability and health marketing such as advertising and raising awareness (Tukker et al. 2009, p. 79). In this context, retail governance, i.e. the use of private labels and standards, can serve to communicate the relevant information to consumers and direct consumer attention to both, the relevant issues and the corresponding products.

However, retail governance (in combination with retail power) may also have the opposite effect and lead to the promotion of unhealthy and unsustainable foods especially as a consequence of competition based on price. Importantly, in times of capital concentration trends, this competition may enhance the promotion of cheaper but more unhealthy and unsustainable food products (Kinsey 1998, p. 6). Furthermore, the ability of retailers to emphasize certain product characteristics over others may also lead to the promotion of unsustainable food products as sustainable. For instance, a health marketing strategy of offering consumers a wide selection of organic goods, e.g. tropical fruits, all year may still have detrimental sustainability outcomes when considering the environmental impact of long transportation ways.

[10] There is a huge general literature on consumers and labels in environmental psychology of course. This literature will not be addressed here.

Retailers are also able to shape the sustainability of food consumption by only offering certain products and therewith determining consumer choices due to their structural power in the supply chain. The leading role of retailers in the development, extension and adjustment of food product choices is increasingly "circumscribing the choices the consumer can make" (Dawson 1995, p. 77). Particularly in Europe, retailers can decide "what food products we will want to eat before we have even given it a second thought," according to critical observers (Blythman 2006). In other words, retailers influence consumers purchasing decisions to the extent that consumers can only reject or accept what retailers offer (FAWC 2005, p. 35). They shape and influence the needs and wants of consumers by what they make available in stores. They may eliminate less sustainable and unhealthy food. They may also eliminate variety or unprofitable sustainable choices, however. Busch emphasizes that retailers' market power, their ability to reorganize supply chains and the high competitive pressure can have positive consumer effects, because "supermarkets can and do sometimes offer consumers lower prices, better quality, greater variety, and safer food than they might have purchased in open-air wet markets or small family-owned grocery stores" (Busch [forthcoming]). At the same time, retail power may also lead to a reduction of variety in sustainable foods.

One core strategy in retail governance with respect to sustainable lifestyles is the provision of certified/labeled food. These labels communicate sustainability criteria adhered to during production and manufacturing processes and tend to emphasize health, environmental or fairness characteristics. Many organic and eco-labeled products enjoy great popularity among consumers and offer large profits to retailers at the same time. Retailers use these labels to market particular products and brands as 'sustainable'. Dixon circumscribes this procedure as formal 'accords' between supermarkets and consumers that shape consumer lifestyles towards an idea of 'how to live the good life' (Dixon 2007, p. 31).

At the same time, the certification and labeling of products may in some cases just be a "performing" of sustainability. In fact, research on private governance in general has shown that labels are frequently created by business actors to undermine the potential effect of other and more stringent labels (Fuchs 2006). Similarly, sustainable consumption research has highlighted the very ambivalent role of the individualization of responsibility for sustainable development via the expectation that consumers will and can shape the sustainability of the system as such through individual consumption choices (Maniatis 2001).

In sum, scholars have pointed to the influence of retail governance on the sustainability of lifestyles via the promotion of certain food choices. However, little is known about the overall

impact of retail governance on sustainable lifestyles as well as respective differences between different regions of the world.

4.2 Current Developments in Retail Initiatives

As pointed out above, the promotion of "sustainable" food products to consumers by private labels is a reaction to consumer concerns and especially pressure of consumer groups, to some extent. Given the existence of these consumer concerns, the promotion of "healthy", "safe", "environmentally friendly" or "fair" products allows retailers the reaping of additional rents. Retailers are "both reactive and proactive agents in the process of consumer choice" (Dawson 1995, p. 77).

Almost all food retailers use private labels to communicate certain product (and to a lesser extent process) characteristics in terms of sustainability to consumers by now. The labels employed reach from labels created by associations of organic farmers to the fair trade label to retailer specific eco- or quality-focused labels. These labels differ strongly in their "content." While the labels created by associations of organic farmers (mostly in the 1980s) tend to reflect quite ambitious standards in terms of process and product characteristics, other eco-labels have been found to be based on rather weak standards if not present mere rhetoric. Many retail governance schemes will fall somewhere in between those two poles.

Retailers tend to react strategically to consumer demand when creating corresponding governance initiatives, i.e. to address the relevant issues but not necessarily in the – from a sustainability perspective – most effective way. The same applies to retailer's impact on public governance initiatives, of course. For instance, consumer concerns about health issues led to a strong demand for nutrition information on food products. Food retailers reacted to this concern. But while European consumer groups promoted the traffic light labeling scheme for food, which had already been successfully introduced by retailers in Britain, the food industry developed an alternative instrument – the guideline daily amounts (GDA). In June 2010, the European parliament voted against the food traffic light labeling and in favor of the GDA industry model (Foodwatch 2010).

Consumer organizations are also putting pressure on food retailers with regard to environmental issues, a fact that led to new food choices in supermarkets. For instance, Greenpeace's complaint about high pesticide use in fruits and vegetables made the German retailer Lidl certify and label its fresh products. Issues of fairness are also increasingly met by retail initiatives when including fair-trade product choices. For example, the campaign 'Poverty and the Private Sector' of Oxfam International criticized the bad and dangerous working

conditions often accepted by large companies. As a result, Starbucks, who was especially assaulted by consumer groups, decided to increasingly promote coffee carrying the fair trade label.

An examination of current scholarly engagement with retail governance and sustainable lifestyles and a cursory look at current trends in the retail sector show that retail governance does influence the sustainability of consumer lifestyles. Retailers initiate own eco-labels as a marketing strategy to consolidate trust among their customers, especially when it comes to their own-label products. These private product labeling initiatives may have positive impacts on sustainable consumer lifestyles. However, retailer's engagement with such issues is selective at this point. At the same time, retail governance schemes also promote unsustainable products or undermine more competing private governance schemes, which have more stringent sustainability criteria. Accordingly, further research on the overall impact of retail governance on the sustainability of consumer lifestyles is necessary. It is particularly vital to further investigate:

- Which sustainability issues does retail governance address in its communication with consumers in developing and in developed countries?
- What is the impact of retail governance on the sustainability of consumer lifestyle choices, overall?

4.3 Interaction of Public Governance and Retail Governance for Sustainable Lifestyles

Many governments and international organizations engage in the promotion of sustainable lifestyles and have released policy recommendations for sustainable consumption and production. Public governance addresses and promotes sustainable lifestyles with educational campaigns, in which standard-setting plays a crucial role. While some scholars argue that public governance of sustainable lifestyles is important, since "it is in the hand of governments to take the decision whether to allow certain products to be placed on the market" (Durieu 2003, p. 8), other scholars are more critical: They see governments as only having limited possibilities to develop policies that address consumer concerns (Jones et al. 2005).

Public governance has engaged in educational campaigns to promote individual dietary change and has used media and advertising channels to facilitate consumer behavior change. One central mechanism applied by governments and public institutions to encourage more sustainable consumption patterns is labeling, such as eco-labeling. At the international level, the World Summit on Sustainable Development developed a 'Plan of Implementation', which advocates to address unsustainable consumption by "developing and adopting on a voluntary basis effective,

transparent, verifiable, nonmisleading and non-discriminatory consumer information tools" (UNEP 2002, p. 7). Similar efforts exist at the national level in many (developed) countries. Indded, the role of public actors with respect to the creation and promotion of labeling schemes should not be underestimated: "a supportive role from governments and government-based agencies as stakeholders is critical in all eco-labels" (Horne 2009, p. 179).

Public governance and retailers both try to influence consumption choices. They often interact and even work closely together: firstly, public policy sets the guidelines for retailers' engagement; secondly, public bodies assign retailers an important role in the pursuit of sustainable lifestyles. Public governance sets the policy framework for the promotion of sustainable consumption and retailers act within these frames. In this context, Fuchs and Kalfagianni's analysis of European retailer reports shows that public governance matters to retailers and that retailers often commit to standards set by international institutions (Fuchs, Kalfagianni 2009, p. 563). At the same time, governments assign retailers at least a share of responsibility for the promotion of sustainable food products. For instance, the UK government states that governments and businesses both are responsible for enabling consumers to make sustainable choices (Defra 2005, p. 44). Likewise, in a recent report, the UK government appealed to retailers to take an educational role and help consumers eat a healthy and sustainable diet (Defra 2010).

Correspondingly, the European Commission sees retailers in a strong position to influence more sustainable consumption and to support an agenda to empower citizens, as consumers, to make sustainable environmental choices (European Commission 2008b, p. 8). It argues that retailers have the power to "raise awareness and influence shopping choices by putting more sustainable options on the shelves. Ultimately, this can lead to better and greener products on the shelves for consumers at more affordable prices" (European Commission 2010c). In the European Union, public governance focuses on initiatives, which promote sustainable lifestyles particularly with regard to environment and health issues. On these issues, public bodies already work closely together with retailers. In promoting environmental sustainability, for instance, the European Commission and the European retail sector together set up a Retail Forum for Sustainability to promote more environmentally sustainable consumption patterns, in 2009. It was formed in context of the implementation of the 'EU Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy' (European Commission 2008b), presented by the Commission in July 2008. With regard to health, the recent European decision on the provision of nutrition facts in food products poses also an example of a close interaction between public governance and retailers. However, while the first initiative

reveals the influence of the EU as rule-setters and initiator of retailer action, the rejection of the traffic light system for food in favor of the industry-led GDA system, sheds light on the influence of retailers on public policy making.

International organizations also have increasingly set guidelines to foster sustainable consumption and production. Since the UN Guidelines for Consumer Protection were expanded to include elements of sustainable consumption (UNEP, Consumers International 2004) in 1999, it has become a major policy issue to support not only sustainable production, but also strengthen the consumption side. These guidelines focus on national policies to promote more sustainable consumption. Again, UNEP also sees retailers as having a key role in helping change consumption patterns (UNEP 2006a).

With respect to Asia, the project 'Capacity Building for Implementation of UN Guidelines on Consumer Protection (sustainable consumption), as a collaborative effort between the UNEP, Consumers International, the Center for Environment and Development, and the Danish Consumer Council, pursues the goal to implement the UN guidelines on sustainable consumption and share European and Asian experiences (UNEP 2005). The initiative focuses mainly on environmental dimensions of sustainability, however, also including health issues as an important factor for sustainable lifestyles. The report found that awareness and perception to the relevance of sustainable consumption are not very high in Asia. It highlights that different regional environments have differing needs in promoting sustainable consumption and also indicates that voluntary business instruments may be supportive to implement the UN guidelines.

Despite increasing public governance initiatives to promote sustainable lifestyles, Duchin (2005) argues that these policies have not been effective. In the case of more healthy diets, she sees a lack of dialogue among stakeholders responsible for the failure of public initiatives and points to the constraints of political decision-making:

> National governments are charged with protecting the public's food supply and health. But having a wide range of responsibilities, from administering agricultural subsidies to approving health claims on food labels, government agencies have other interests to balance against improved public health, namely the autonomy and prosperity of the industries that grow, process, distribute, serve, and export crops, livestock, foods, and meals. (Duchin 2005, p. 110)

In consequence, an acknowledgment of the influence of retailers and retail governance on the sustainability of consumer lifestyles should not be understood as a rejection of the idea that public governance has to take a lead in the promotion of sustainable lifestyles.

Public and retail governance are often closely connected and may support or constrain each other. Therefore, retail governance for sustainable lifestyles needs to be researched in its

connection with public governance frameworks in order to identify effective strategies to foster sustainable consumer lifestyles. It is important to study:

- How does public governance influence retail governance of sustainable lifestyles?
- How can public governance enforce sustainable lifestyles in light of growing retail power?

4.4 Conclusion

Consumers play an important role in the global agrifood system, since purchasing decisions influence what and how food production and processing is managed. At the same time, retailers have a strong influence on consumer choices by predetermining choice sets and promoting certain products or norms relating to product choice. Against this background, the communication on sustainability issues between retailers and consumers in the context of retail governance deserves particular attention. Despite the fact, that retailers have an important function as a link between consumption and production and are responsible for more general processes that influence the sustainability of the agrifood system, however, only few studies have been conducted on the role of retail governance in promoting sustainable consumer lifestyles. We need to better understand retailers' governance practices through a lifestyle marketing perspective or an assessment of product sustainability characteristics. In order to promote a long-term change in the sustainability of of consumption patterns, it is necessary to explore scientifically how private retail food governance shapes the sustainability of lifestyle choices.

5 Retail Governance and Climate Change

Climate change is projected to have significant impacts on conditions affecting agriculture, including temperature, glacial run-off, and precipitation (IPCC 2007). Consequently, agricultural production, consumption, and trade patterns will all be affected by climate variations. Research has highlighted the tremendous difficulties in simulating these changes, given that agricultural outcomes are shaped by complex interactions among people, policies, and nature (IFPRI 2009). For instance, uncertainty about the spatial distribution of climate change effects means that we know little about how actual agricultural production is going to change on location. Precise estimates about how the interaction between climate, comparative advantages in agriculture, and trade policy might influence global agricultural trade flows, are currently lacking (Nelson 2010, p. 13). Fundamentally though, it already appears clear that the poorest will get hit hardest (IFPRI 2009), and that overall supply stability and food security is going to decline (FAO 2008a). Importantly, the impacts of climate change will be intensely spatial (Nelson 2010, p. 16). The consequences are expected to be particularly severe in places with growing populations, such as South and Central Asia, and places with dramatically lower rainfall, higher temperatures and increased water stress, such as southern Europe (FAO 2008a).

Apart from being massively affected by climate change, the agrifood sector is a major contributor to climate change. Land used for agricultural activities occupies about 40-50% of the Earth's land surface (Greenpeace 2008, p. 13). Estimates regarding the contribution of the agrifood sector to greenhouse gas emissions (GHG) vary. One estimate suggests that the agrifood sector as a whole accounts for nearly 14% of GHG emissions directly, while land use change adds an additional 19%, resulting in a total contribution of 43% (Nelson 2010, p. 18). A different estimate puts total agrifood emissions between 17 and 32%, revealing considerable modeling uncertainty (Greenpeace 2008, p. 5). Yet, studies unequivocally find that agriculture can play a crucial role in climate change mitigation, both by reducing its own emissions, and by providing large-scale carbon sinks. Improved cropland management (e.g. with respect to crop species and fertilizer use); better grazing-land management; a reduction of GHG intensive meat consumption; changes in livestock species and improved feeding practices; efficiency increases in food storage, distribution, and retailing; and the restoration of organic soils as carbon sinks could all contribute to mitigation efforts (IFPRI 2009; Greenpeace 2008; Nelson 2010). As a result of changed practices, the agrifood sector could potentially lose its status as one of the largest GHG emitters, and might even become a net carbon sink (Greenpeace 2008, p. 5).

5.1 State of the Art

Business has recently begun to regard climate change both as a challenge and an opportunity (Hoffman, Woody 2008; Ceres 2008). On the one hand, firms are trying to reduce their exposure to increasingly volatile energy prices and looming environmental regulation. On the other hand, there is a realization that consumer demand for climate-friendly products and production harbors enormous market opportunities. Retailers active in the food sector have responded to this by devising a number of private initiatives individually and collectively. While efforts by individual retailers are currently uneven,[11] overall they appear to be increasing; greater cooperation and exchange can also be observed.

Specifically, retail initiatives related to climate change can be distinguished in three broad categories: (i) energy-efficiency initiatives aimed at climate change mitigation; (ii) good agricultural practice (GAP) schemes aiming to enhance the resilience of agricultural ecosystems; and (iii) actions intended to inform and influence consumer choices towards more sustainable products and services. Examples of initiatives developed collectively by retailers are presented in the next section.

In spite of a surge of private programs regarding climate change, little scientific attention has been paid to the topic. In fact, recent research by Fuchs and Boll (forthcoming) appears to be path-breaking in this regard. Specifically, Fuchs and Boll have developed a theoretical model to analyze why particular actors become engaged in private initiatives and whether these initiatives lead to measurable behavioral change. Relying on theoretical assumptions about costs and benefits, they claim that four groups of factors are likely to explain why actors have diverging interests in joining and designing private programs: (1) factors influencing public visibility and civil society pressure, like the size of the company; (2) normative factors, such as the ideological stance of the executive board; (3) the extent to which the private initiatives in question can be marketed, i.e. used to generate extra profit; and (4) factors determining the respective cost functions, such as the availability of suitable technology. This classification of determining factors helps to understand who joins a particular initiative on the one hand, and what determines its design and objectives on the other. Likewise, Fuchs and Boll have suggested three groups of factors that explain the extent to which a program actually induces behavioral change, i.e. can be considered effective: (1) factors influencing collective action problems, e.g. the heterogeneity of the target group; (2) power asymmetries among the involved actors; and (3) factors influencing the likelihood of defection, such as monitoring and sanction opportunities. Using this analytical

[11] Tesco, for example, is very active in promoting and communicating its activities regarding climate change, while Aldi North appears unconcerned with the issue.

lens to comprehensively assess private governance initiatives is a promising approach for future work in the field.

In a preliminary attempt to apply their theoretical framework to the climate change initiatives of the 10 largest retailers, Fuchs and Boll (forthcoming) found that the visibility of a given company, as well as its home country, and the inclusion of reliable non-retail partners, were important factors explaining both commitment to and effectiveness of private standards. Yet, they also found that the implementation of private standards dealing with climate change is quite costly, while providing comparatively little benefits from the retailers' perspective. As a consequence, this means that scope and effect of private standards dealing with climate change are likely to remain modest. Moreover, most retailers dealing with climate change were the ones who also had non-food products in their assortment. Public pressure on these retailers might have resulted from a perceived link between these non-food products and energy consumption issues, rather than between food and climate change. This and other evidence has led Fuchs and Boll to hypothesize that the link between food and climate change is not yet well established in the public debate.

It is an important question, then, how much faith can be placed in the scope and magnitude of private governance initiatives (FCRN 2008; Fuchs, Boll (forthcoming)). After all, competition between retailers is fierce and they have little leeway for implementing measures that cannot be transformed into additional sources of profit. In this line of argumentation, a report by the Food Climate Research Network (FCRN 2008, p. 13) argues that:

> The measures put in place do not challenge our demand for, and the food industry's supply of certain types of food and systems of provisioning that are inherently GHG-intensive. These include meat and dairy products, highly refrigeration intensive foods, those that require rapid modes of transport, and the unquestioned availability of virtually everything, at all times, in all locations. Technological improvements moreover do not address trends in how and what we consume, the demands these place on existing and emerging technology and the way in which technological developments help shape and foster new habits and desires – behavioural norms which may lead ultimately to greater energy use.

This view emphasizes retailers' impact on energy usage and management, but downplays their importance with respect to consumers' behavioral change. After all, product labels, pricing policy, and marketing strategy contribute to shaping consumer demand and behavior. Even so, it seems appropriate to wonder whether retailers will ever have a genuine interest in reducing their assortment of GHG-intensive food, when it can be sold with a profit.

What is more, the quote above reminds us that technological improvements are not necessarily beneficial. If a new efficient technology leads to disproportionate rises in demand, the net environmental effect might even be detrimental. It is because of complex relationships like

this that we need to consider how changes in particular types of behavior create wider systemic challenges (FCRN 2008, p. 16). Does it make environmental sense for a European consumer to buy an organic kiwifruit sourced from New Zealand, rather than a non-organic one from Italy? It is because of these ambiguities that the FCRN report concludes that, in essence, we are not facing a problem of management or product choice, but a problem of overconsumption (FCRN 2008, p. 16). The report also stresses the role of consumption choices for agricultural production. Specifically, it suggests that at least half of the emission cuts at the farm stage will be dictated by consumption changes, i.e. from changes in what and how much we eat (FCRN 2008, p. 19). Overall, this gloomy view suggests that faith in voluntary programs, technological and efficiency increases, as well as management improvements is misplaced and that we have to think in much bigger and more radical terms. In the end though, all this does not speak against retail governance as such. While retail governance by itself may well insufficient, there is no inherent reason to believe that it cannot be an effective and desirable complement to more profound changes within the global agrifood system.

5.2 Current Developments in Retail Initiatives

In the following, we present examples of different types of retail initiatives targeting (at least to some extent) climate change.

Energy-efficiency initiatives

One major collaborative energy-efficiency initiative is the Post-Copenhagen Retail 20:20 Vision of the European Retail Round Table (ERRT), which commits 17 retailers and 9 federations to action in six areas: sourcing; resource efficiency; transport and distribution; waste management; communications and reporting (ERRT 2009). Among other pledges, the vision includes two quantitative targets:

- to reduce energy consumption per square meter of commercial premises by a minimum of 20% by 2020 compared to base year reference levels (typically 1990);
- to work towards exceeding the European Commission's target of sourcing 20% renewable energy by 2020.

While ERRT's membership is not limited to food retailers, signatories to the retail vision include such major firms as ASDA/Wal-Mart, Auchan, Carrefour, Metro Group, Rewe Group, and Tesco.

A second important collaborative private initiative is the voluntary *Retailers' Environmental Action Programme* (REAP), which provides information and facilitates dialogue between retailers, as well as with stakeholders (Retail Forum 2009). REAP's members are 21 retailers and 7 retail associations, again including many of the major food firms. One of REAP's initiatives has been to set up a public database, where members publish sustainability commitments.[12] Tesco, for instance, provides 10 sustainability commitments, including the aim to reduce emissions from stores and distribution centers by 50% in 2020 compared to 2006; and the long-term objective of becoming a carbon free business by 2050. Another example of sustainability commitments is Auchan's pledge to increase renewable energy production by methanation of fermentable waste from 2,300t of waste in 2008 to 3,500t in 2010. Based on the official keywords assigned to the total of 206 commitments listed in the REAP database, 57 deal with energy efficiency, 39 with increasing consumer and employee awareness for environmental issues, 23 with green house gases, and 9 with renewable energy.

Simultaneously, European retailers participate in broader global energy efficiency initiatives, not necessarily led by them. These include, for instance, the Copenhagen Communiqué – a statement from the international business community published ahead of the United Nations (UN) climate change conference in Copenhagen in December 2009 – as well as the Carbon Disclosure Project – an independent non-profit organisation measuring and documenting corporate greenhouse gas emissions across the globe. Together, these activities clearly show that the link between climate change and private governance is becoming more and more important.

Good Agricultural Practices

Retailers also have a more indirect impact on climate change, because they influence the way agriculture is conducted in the first place, e.g. through GAP schemes. One particularly important GAP scheme is the Global Partnership for Good Agricultural Practice (GlobalGAP). As described in Fuchs and Kalfagianni (forthcoming, see also Fuchs et al. (2010)), GlobalGAP is a private sector body that sets voluntary standards for the certification of agricultural products around the globe. GlobalGAP is a pre-farm-gate standard, which means that the certificate covers the whole production process from farm input to final product until it leaves the farm. Also, the standard is a business-to-business label not directly visible to consumers. GlobalGAP's membership consists of 42 retail and food service members, 149 producer and supplier members, and 100 associate members, such as certification and consulting bodies. The scheme regulates a range of different issue areas, such as record keeping; workers' health; safety and welfare; waste

[12] http://ec.europa.eu/environment/industry/retail/reap/ (Accessed 30 June 2010).

and pollution management; recycling and re-use; environment and conservation; and traceability. Clearly, the provisions contained in GlobalGAP and similar GAP schemes have impacts on energy usage, energy efficiency, emissions output, and climate change resilience. Depending on the quality and content of the standards imposed on suppliers, retailers are in a unique position to pursue environmental objectives in the agricultural supply chain, if they want to.

Initiatives Aimed at Consumer Behavior

Several retail chains have recently experimented with initiatives intended to inform an influence consumer choices towards more sustainable products and services. Tesco, for instance, has committed to reduce the domestic carbon footprint of its consumers by 50% till 2020. To this end, Tesco is actively increasing the number of carbon labeled products. Likewise, Lidl has initiated a communication campaign via internet and print media to raise the consumer's awareness of environmentally friendly products. Carrefour has run hosted awareness events in stores and head offices as early as 2001, while simultaneously promoting sustainable products through shelf-stoppers, posters, catalogues, and publicity campaigns starting 2005. While these initiatives are clearly a step in the right direction, their overall effect is likely to be modest, seeing that most measures do not give clear targets and their number is fairly limited.

In conclusion, one can observe that retail governance is increasing both in extent and coverage. Initiatives dealing with climate change and matters of energy efficiency are prominent and make up a large share of retailers' current sustainability efforts. Despite this development, there are hardly any scientific studies dealing with these initiatives both theoretically and empirically. Thus, the following questions need to be answered by future research:

- What determines design, membership, and compliance with a given private governance initiative?
- Are there systematic differences between retail governance in different regions? If so, how can they be explained?
- What is the overall contribution and reach of retail governance regarding climate change mitigation and adaptation efforts?

5.3 Interaction of Public Governance and Climate Change Retail Governance

Current developments in public governance on agrifood reflect that the perceived threat of climate change is dramatically increasing. In a foresight report dealing with agricultural challenges, the European Commission, for instance, argues that the impact of agriculture and food systems

on climate change is huge, but that there is large scope for change (European Commission 2009, p. 53). Specifically, the report highlights the need for low input concepts, increased diversification, and new ways of food production, processing, retailing and purchasing. Apart from growing government awareness, pressure from non-governmental sources is rising. For instance, the 3rd Forum for the Future of Agriculture (FFA), a prominent initiative by the European Landowners' Organization (ELO) and agribusiness company Syngenta, has recently released a public statement calling for a reform of the Common Agricultural Policy (CAP) of the EU. The statement is based on two main messages: "(1) global challenges of food security, climate change, and environmental degradation must be met; and (2) failure to act has detrimental effects on food production, environment and climate" (FFA 2010, p. 1). Similar developments are not only visible in the EU but globally. Given the intensified pressure on global agrifood systems, there is an urgent need to increase both mitigation and adaptation capacity in short timescales. Clearly, then, all governments struggle with the question of how to make the agrifood sector as a whole sustainable.

On the global level, retail governance is fostered as part of a wider initiative to increase sustainable consumption and production (SCP) activities. The SCP concept is mainly promoted by the Marrakech Process organized by the United Nations Environment Programme (UNEP). The Marrakech Process, in turn, is a global process to support country level action on SCP, as called for during the World Summit on Sustainable Development in Johannesburg. The overarching objectives of this process are (1) to assist countries in their efforts to green their economies; (2) to help corporations develop greener business models; and (3) to encourage consumers to adopt more sustainable lifestyles. To this end, the UN closely collaborates with national governments, development agencies, corporations, and civil society, thereby facilitating projects and capacity building on the ground.

In light of the Marrakech Process and the EU's long-term agricultural strategy, the EU has adopted a Sustainable Development Strategy in 2006, and, more recently, released a *Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan* in 2008 (European Commission 2008b; European Council 2008).[13] Among other things, this plan stresses the need for better life-cycle assessments, eco-labeling, greater environmental awareness, and increases in energy-efficiency. Subsequently, the European Commission has published a practical guide aimed at businesses interested in adopting life-cycle assessments (European Commission 2010a). Another major initiative coming out of the plan was the creation of the Retail Forum for sustainability in early 2009. The Retail Forum is a stakeholder platform set up in order to

[13] http://ec.europa.eu/environment/eussd/escp_en.htm (Accessed 30 June 2010).

exchange best practices on sustainability in the European retail sector and to identify opportunities and barriers that may further or hinder the achievement of SCP. With this, the EU officially recognizes that retailers are placed in a strategic position at the intersection between producers and consumers, impacting on both consumption and production processes. The website of the Retail Forum exemplifies this point with the statement that "retailers can play a significant role in provoking positive changes in patterns of consumer demand through their partnerships with suppliers and through their daily contact with European consumers".[14] Thus, retail governance is acknowledged and promoted by initiatives and frameworks at the UN and EU level.

With respect to Asia, the Marrakech Process has led to a range of projects promoting SCP in the region.[15] Examples of this include SCP roundtables in China and India, which have established the four priority areas of (1) sustainable procurement; (2) increasing eco-efficiency; (3) improving waste management; and (4) promoting sustainable construction and building (UNEP 2006b). Based on a first glance at these priority areas and the latest meeting report of the SCP roundtable in China (UNEP 2009), it seems that food and agriculture are only marginal topics for SCP in Asia. Why could this be? Unlike their European counterparts, Asian economies are at a very different stage of the development process, with many path-breaking decisions about energy, infrastructure, and urban planning still to come. In terms of priorities, it is no wonder that these policy areas are in the spotlight at high profile official meetings. Despite this, we can see that Asian authorities, too, are active in the field of food related SCP. With respect to carbon footprints and labeling, for instance, a specialized newsletter reports major developments in Japan, China, Taiwan, Thailand and South Korea (PCF World Forum 2010). One also has to keep in mind that many of the retailers active in Asia have their headquarters in Europe or North America. Many of the SCP strategies implemented against the regulatory background of the EU or the United States will have spillover effects on retailers' branches in Asia. Also, much food sourced in Asia ends up being sold in the EU, so that Asian exporters are directly affected by EU governance. Partly for these reasons, case studies comparing Asian countries and the European countries will bear fruitful insights into diverging policy priorities, agricultural practices, consumption behavior, and long-term projections.

Besides the fact that SCP is gaining in importance for public policy-making, it is important to recognize that agricultural policy is one of the most controversial and heavily regulated public policy fields. Ultimately, decisions about the agrifood sector are inevitably tied to

[14] http://ec.europa.eu/environment/industry/retail/about.htm (Accessed 30 June 2010).
[15] http://esa.un.org/marrakechprocess/regionsasia.shtml (Accessed 30 June 2010).

national security interests, rural livelihoods, economic and environmental interests, trade, and questions of human and animal welfare more generally. Because of this, there is a plethora of involved opinions, stakeholders, and regulatory activity. Consequently, retail governance is embedded in a much larger debate and structure than it might appear at first. Speaking for the EU, a recent edited volume by Boulanger and Messerlin (2010) forcefully highlights how the well established problems of food security, safety, and quality have now been joined by severe long-term problems with respect to energy, water and climate change. The crucial importance of agrifood policy for the EU is reflected by the fact that it represents the single most important part of the budget with a share of 34% from 2007 to 2013.[16] In addition, the CAP is the most integrated and, arguably, most important EU policy besides competition policy, and covers about 90% of the total agricultural production in Europe (IATP 2007, p. 3). Not surprisingly, then, CAP is one of the greatest sources of intra-community strife and conflict.

Depending on the respective questions asked and region studied, research on food retail governance needs to elaborate on the wider regulatory and institutional context. Without a sound understanding of the perimeters within which retailers have to operate, a narrow focus on private initiatives would be misleading. Particularly with respect to Asia, where agrifood policy is different from country to country and not yet well covered, meaningful research depends on good networking with stakeholders and policy-makers on the ground. Overall, one can conclude that agrifood is one of the most important policy fields globally, with vibrant governance activity in many areas. The recent policy focus on SCP under the global heading of the Marrakech Process illustrates that studies on the interaction between private governance initiatives and the public regulatory context are required. Key questions in this regard are:

- How does retail governance fit into long-term governmental strategies with regard to the manifold climate change challenges confronting the agrifood sector? Can we expect an even greater regulatory emphasis on decentralized and private governance in the future?
- Which changes to the overall public regulatory framework are necessary in order to accommodate and steer the rise of private governance with respect to climate change?

5.4 Conclusion

The fate of global agrifood and climate change is jointly determined. Agricultural production and consumption have huge impacts on the state of our environment, while there is no production and consumption in the first place without functioning environmental services. We cannot think one without the other. Against an increasing recognition of these relationships, the world's largest

[16] http://europa.eu/pol/agr/index_en.htm (Accessed 30 June 2010).

food retailers have started to adopt private initiatives that deal with the issue of climate change. Because retailers have the capacity to influence production conditions, consumer behavior, and their own environmental footprint, they appear uniquely placed to promote environmental objectives across the board.

In spite of the relevance of the topic, research so far has been limited. Currently, there are no comprehensive explanations for the fact that some retailers have ambitious quantitative targets, while others completely neglect the issue. Nor do we understand the interaction of retail governance on climate change with larger scale public governance and gender issues. We need to conduct research on these complex interactions in order to derive balanced qualitative assessments of retail governance in this area. Is hope in corporate responsibility and market mechanisms warranted? Or are we simply looking at an example of an ever expanding market seeking to turn newly arising public concerns into profits, with little chance of long-term structural transformation? Likely, in-depth research would confirm a little bit of both. Yet, convincing scientific answers ultimately rest on future research efforts.

6 Retail Governance of Alternative Food Products

Retailers have long recognized the market potential of organic foods and other types of alternative foods. This section examines how retailers are actively governing two of these alternative food types, namely organic and genetically modified (GM) food products. The discussion shows rather diverging developments: whereas the organic food market is widely supported by consumers, the introduction of GM food has sparked huge controversies, which, in effect, has led to the removal of GM food from the shelves of many retail chains. Thus, whereas organic products are being pushed by demand as well as supply side factors, unfavorable consumer response has made GM products difficult to market, especially in Europe. The discussion below highlights the different regulatory responses taken by retailers and stresses their impact in the development process of these respective markets.

Organic food products have seen a surge in demand in recent years, mainly as a result of growing consumer awareness about health, safety and environmental issues. For example, a series of food scandals has intensified consumer concerns about pesticide residues, hormones in food products, and the impact of GM food. As a result, organic food products have been perceived as an attractive alternative to conventional foods, especially in Europe, where the organic food market has seen rapid growth. Parallel to growing consumer demand in Europe, organic food production in Asia has expanded rapidly, with China, India, Thailand, and the Philippines, taking a leading role (Willer et al. 2008). In 2007, China was the fifth biggest organic producer in terms of land area (1.55 million hectares), while India came in seventh (Cadilhon 2009). Although the dynamic growth of organic agriculture in Asia can largely be attributed to changing consumption patterns elsewhere, domestic markets are also expanding, illustrated by the fact that most supermarkets in major Asian cities now sell local organic products and imports (Wai 2008).

In contrast, consumers in Europe have demonstrated a vibrant opposition to GM products. As a response, many retailers have banned GM foods from their shelves. Some initiatives even have started to address the question of GM products in animal feed. And yet competing market forces, in particular GM corporations are pushing for the diffusion of GM products and production methods in global markets. Against this background, the determinants of the influence of retail governance on GM production deserve particular attention.

6.1 State of the Art

Scholarly research on the impact of retail governance on organic and GM foods is limited at best, so that this section can only be a preliminary assessment. With respect to the organic sector, the

existing literature appears to stress three dangers associated with the current transformation of the organic sector and its governance: (1) changes to production processes, (2) adverse impacts on small farmers, and (3) regulatory capture. Each of these will be discussed briefly below.

The concerns with respect to changing production processes revolve around the organic sectors' development from a niche to a more mainstream market, whereby large multiple grocery retailers have been able to capture dominant market shares. Traditionally, the organic food market was a specialist market consisting of a limited number of small and independent retailers (Jones et al. 2005; Jones et al. 2001, p. 365). Scholars argue that the entry of agribusiness into the organic sector and the resulting concentration in distribution and retailing has led to an increasing industrialization of organic agriculture. Allegedly, this development stands in contrast to the original objectives of the organic movement (Buck et al. 1997; Raynolds 2004). In particular, the increasing importance of large retailers might drive farming practices away from the standards and philosophies of alternative food movements (Pollan 2006). Klonsky specifically points to the fear that the distinction between conventional and organic food products may blur, thereby weakening the organic market (Klonsky 2000). A similar argument is that it is clear from the outset that conventional retail chains need to ensure that their promotion of organic foods does not seriously damage the image and the sale of their very much larger conventional food ranges (Jones et al. 2001, p. 365).

Scholars do not only fear that the powerful role of retailers impacts product quality, but also argue that the corporatization of organic agriculture will weaken the position of farmers (cp. Section 3). Kledal (2005), for instance, argues that the growing bargaining power of supermarkets and discount chains puts pressure on farmers in the organic food supply chain. Here, supermarkets' use of unfavorable control mechanisms such as the prolongation of payments to farmers, increasing fees for renting space on supermarket shelves, as well as opening fees when new outlets are being opened, strengthens retailers' position over producers (Kledal 2005). While this study looks at the impact of retailers on farmers in an industrialized country such as the Netherlands, Barrett's study on exports of horticulture produce in Kenya similarly stresses that supermarkets are in a powerful position to determine production processes in the source country (Barrett et al. 1999, p. 160). The study emphasizes the irony which lies in the fact that a post-modern consumer movement in the United Kingdom is inextricably linked to the emergence of industrialized large-scale farming in Kenya. More generally speaking, scholars working in this line of inquiry stress that the demand and the production side of agrifood systems are necessarily related and one cannot assess the sustainability of either without the other.

Another fear concerning retail governance is that "regulatory capture" may occur, which means that private interests use regulatory agencies to serve their own particularistic ends:

> Particularly if firms who are not committed to the organic philosophy and practice gain a foothold in the market and its regulating bodies, there will be pressure to weaken the standards – to formulate standards more conductive to large numbers of firms entering the marketplace (Allen, Kovach 2000, p. 224).

This suggests that close scrutiny should be paid to the way in which standards are developed, implemented, and monitored (cp. Fuchs et al. 2009; Fuchs, Kalfagianni 2010b). Boström and Klintman (2006) show in the case of Sweden, for instance, how retailers included organic products in their distribution chain at an early stage, and accepted the important role of independent and credible third parties for labeling organic food. At the same time, concentration and vertical integration of the Swedish system for retailing needed an inclusive eco-labeling strategy and advocacy groups' cooperation with retailers (Boström, Klintman 2006, p. 168). In Sweden, retailers have particularly pursued two strategies: (i) partnership with civil society organizations, e.g. the Association for Control of Organic Production (KRAV); and (ii) the development of own eco-labels (Boström, Klintman 2006). However, the strong position of retailers and processing industries within the Swedish organic advocacy network has led to an "eco-pragmatic" framing of organic products, which accepts structural facts such as concentrated and vertically integrated retailing, large-scale distribution systems as well as neoliberal principles in general (Boström, Klintman 2006, p. 170).

Turning from the organic to the GM food market, there appears to be hardly any scholarly work of the overall impact of retail governance. We know, of course, that – in contrast to the organic market - consumers were actively opposed to the introduction of GM products in Europe and have been successful in altering retailers' policies. One explanation for the success of consumer pressure appears to be that the presence of own-label brands has brought retailers closer to potential risks: if they support GM food, they risk tainting their brand identities (Pearce, Hansson 2000). Therefore, Pearce and Hansson state that retailers pursue pre-emptive moves as part of a broader strategy to foster consumer trust and impose requirements for food, which exceed regular legislative labeling policies (Pearce, Hansson 2000). Accordingly, voluntary bans of GM ingredients are closely connected to the expansion of private labels. Retailers fear that negative consumer responses to own-brand products with GM ingredients could damage the image of the product lines or the store. More generally, retailers face three choices in how they want to deal with GM food (Lockie et al. 2005):

> The first, echoing the approach promoted by the biotech sector, is to continue to promote 'risk management' and 'substantial equivalence'; that is, to cooperate with existing legislative requirements that effectively hide the GE status of foods through minimal, if any, labelling. The second, is to seek to

> eliminate all GE foods by stocking only those that can be certified GE-free using reliable audit procedures. The third, and perhaps most likely, is a compromise whereby genetically engineered and other biotech foods sit alongside organic (or other 'natural') foods on supermarket shelves.

By opting for the second strategy, at least in the EU, retailers were successful in constructing themselves as "food safety gatekeepers" (Kalaitzandonakes, Bijman 2003, p. 367), thereby promoting a favorable image in the public. In conclusion, the case of GM foods reveals that retail governance can exhibit complex interaction effects: because the market has become so vertically integrated, and because retailers have increasingly introduced their own brand identities, they had incentives to be relatively responsive to consumer pressure.

6.2 Current Developments in Retail Initiatives

While the organic food movement originally started as a countermovement to industrialized agriculture, today, it has become integrated into the conventional food production, distribution, and retail system (Clark 2007). For instance, conventional retail outlets sell 80 percent of all organic food in the United Kingdom and 90 percent in Sweden. But also in Asian countries such as China the majority of organic food sales occur through conventional supermarket chains (Lyons 2007, p. 155). Even though the organic agrifood market still presents a niche market as compared to the range of conventional food products, its impressive growth dynamic has created supply shortages in the global organic food industry starting from 2005 (Willer et al. 2008, p. 16).

In Asia, China and India have become major business partners in organic market chains, as exemplified by the organization of a China BioFach and India BioFach (Cadilhon 2009). Moreover, the comparatively rich Asian economies such as Japan, South Korea, Taiwan, and Singapore effectively serve as regional engines of growth for the organic sector. Generally speaking, vibrant economic development, coupled with the fact that many of the biggest cities in the world are located in Asia, make market observers hopeful that greater domestic sector growth can be expected for the immediate future (Wai 2008, p. 104).

In contrast to the growing and proliferating market for organic foods, GM food has largely been banned by European food retailers. According to Kalaitzandonakes and Bijman (2003), a consortium of seven major European food retailers[17] that aligned to source non-GM ingredients for their private-label products, has inspired similar actions in the whole European food industry. In a second initiative, European retailers launched bans against products where the animal was reared on feed produced from GM crops. These voluntary bans have repeatedly pre-

[17] Sainsbury (London, Great Britain), Marks and Spencer (London, Great Britain), Carrefour (Paris, France), Delhaize (Brussels, Belgium), Migros (Basel, Switzerland), Effelunga (Rome, Italy) and Superquinn (Dublin, Ireland)

empted and exceeded regulatory requirements of the EU, while, at the same time, creating widespread public attention (Kalaitzandonakes, Bijman 2003). Following these bans, European food manufacturers avoided additional costs of maintaining both GM and non-GM product lines to suit different markets and followed the ban of GM-products of major European retailers (Kalaitzandonakes, Bijman 2003). British food retailers, for instance, have largely removed GM ingredients, albeit with strong variations in the extent of this policy. While some major retailers such as Iceland, Marks & Spencer or Sainsbury claim to have eliminated GM ingredients from all their own branded products, other retailers such as Tesco or Safeway follow a more liberal approach and have reduced GM-containing foods, but claim that they cannot remove all GM products from the shelves (Jones et al. 2000, p. 444f).

The established retail chains have an important position in shaping organic and GM food markets for a number of reasons. Precisely because the agrifood sector has become such a centralized market, both vertically and horizontally, retailers' market decisions, such as the sourcing of products, have immediate consequences for the reach and growth prospects of GM and organic foods. Major retailers overwhelmingly understand alternative foods as an opportunity to create additional economic rents, i.e. profits (Buck et al. 1997). In effect, retail chains use branding processes to manipulate terms such as "organic" to refer to new, controversial meanings with marketable benefits, such as "healthier" or "tastes better" (Buck et al. 1997, p. 12). To this end, they make use of voluntary labels such as organic, country-of-origin or eco-labels, giving consumers a "free" choice using general market mechanisms. Some of these labels are "private labels", meaning that they brand product lines offered exclusively in the stores of a particular retailer. Thus, labels allow retailer chains to associate GM and organic foods with projected benefits in terms of consumer health, production efficiency, product durability, or reduced environmental harm. This gives them a leading position in providing consumers with relevant product information, thereby actively exerting an influence on consumption habits (cp. Section 4). In consequence, it appears highly relevant to scrutinize the effects of private retail governance in the organic and GM food systems. The following discussion is intended to give a cursory overview of current retail initiatives relating to private retail governance in the EU and Asia in these two sectors.

In summary, retail governance does address the growing market of alternative foods. Previous research indicates that retailers' marketing and labeling of products have important impacts on the sustainability of the food system. Important questions regarding regional differences between countries, burden sharing through the supply chain, and about effectiveness,

legitimacy and accountability remain grossly under-researched, however. In light of these glaring research gaps, the following questions appear particularly urgent:

- What are the determinants of retail governance's influence on alternative foods?
- Who are the key stakeholders in the supply chain and what are their responsibilities for monitoring, compliance with, as well as enforcement of, rules with regard to alternative production processes?
- How do retailers engage in legitimizing and de-legitimizing alternative food products?

6.3 Interaction of Public Governance and Retail Governance of Alternative Foods

Retail governance of alternative food products is closely connected to public governance, because retailers' labeling policy is shaped by public regulations. In the case of organic foods, for instance, scholars found that "[f]ood labels constitute an instrument which is based upon a public-private interaction: the state either develops the label or defines the rules for organic food labels to be implemented by private actors" (Hofer 2004, p. 156). International, national and more specific EU regulations set the benchmark for private regulation, which constitute the standards large retailers need to meet. The subsequent section starts with a discussion of public regulation with respect to organic food, followed by an overview of how GM food is regulated.

Today, most major economies have established regulation for organic production. In Asia, for instance, the Chinese legal framework was finalized in 2005 and the *Indian National Programme for Organic Production* (NPOP), which only covers export regulations so far (Huber et al. 2008, p. 59f), was passed in 2001. They have explicitly been formulated in harmony with international standards such as the Codex or International Federation of Organic Agriculture Movement (IFOAM) while keeping national requirements in mind. In the case of India, on the basis of compliance with the *National Standards for Organic Production* (NSOP), an organic logo and the trademark "India Organic" can be granted (Department of Commerce 2005).

In the EU, organic farming has been governed by Regulation (EEC) 2092/91 since 1991, which sets out the rules for production standards, inspection and labeling of food products in response to increasing consumer demand. A revised version of this regulation, the new Regulation (EC) 83472007 has come into force on 1 January 2009 (European Commission 2007). They are largely comparable to the basic norms of the IFOAM. However, EU regulations on organic farming, that pose the basis for national legal frameworks, differ from country to country (Hofer 2004, p. 183f). EU regulation such as the 2004 EU Commission *European action plan for organic food and farming* leave space for national variation and for EU countries to define

autonomously what is ecological (Boström, Klintman 2006; European Commission 2004). Other certified labeling associations have the authority to set their own labeling standards. But since the EU's legal framework is binding, these associations need to meet this minimum standard. However, "private standard-setting organization and some governments have long-established standards for organic production that are more detailed and/or more demanding than the EU Regulation in certain areas" (Padel et al. 2009, p. 245). A research project on EEC Regulation 2092/91 found, in a comparison of this regulation with private and national standards, over 30 differences in organic standards in countries that have a long tradition of organic farming (Padel et al. 2009, p. 249).

Different public requirements have an influence on developing countries as well. The focus of Asian countries to export organic foods to the US and the EU results in production requirements shaped by these external conditions. China, which has stringent production requirements, still needs to be recognized by importing countries. India's NPOP, which is only applicable to export goods, has achieved recognition, but still needs to implement legislation for domestic production and supply chains (Wai 2008, p. 105). Wai highlights that these requirements may not be appropriate for the production and sector development in the region and cripple the domestic market with undue stringent production and conformity assessment requirements (Wai 2008).

Turning to GM-food labeling, scholars observe a major difference between countries with voluntary labeling guidelines and those with mandatory labeling requirements in terms of coverage and threshold level of ingredients (Gruère, Rao 2007). While there is a large share of publications on different regulatory environments with regard to organic and GM-policy, there is a lack of information on and scholarly engagement with the interplay of private regulation initiatives by large retailers and public standards on organic foods and GM regulation.

The EU regulation of GMOs is based on the principle of risk analysis and follows a 'zero tolerance' approach, which implies a 0.9% threshold for GM presence in foods. The EU has introduced the first labeling policies for GM food in 1997 and requires information if a food consists of, contains, or is produced from GMOs, but it does not require this for animal-based products fed with GM feed. In this case, national labeling policies have evolved as well and differ widely in "nature, scope, coverage, exceptions, and their degree of enforcement" (Gruère, Rao 2007, p. 51). Scholars point to the fact that the EU's labeling requirements of GM foods for food processors and retailers had the side effect that GM food products have disappeared from the retail level, because processors have changed the ingredients (Kalaitzandonakes, Bijman 2003). There is no market for GM-derived food ingredients in the EU, however, retailers are concerned

that they may not be able to maintain their non-GM sources, because producers increasingly use GM technology (Defra 2009).

While a large number of developed countries have implemented labeling schemes for GM-foods, only few developing countries have introduced them so far. China is one of the few countries that introduced a strict and effective labeling scheme comparable to EU legislation in 2004. While in Europe retailers and food processors have decided to shun GM products on a general basis, China is the only country where few labeled GM products are available, since local food producers use GM soybeans (Gruère, Rao 2007, p. 56). In India, the Central Committee for Food Standards has only published draft rules to introduce labeling and approval requirements for GM food so far.

Research has indicated that public and retail governance are closely intertwined when it comes to the labeling of alternative food products. There is still confusion about the plethora of different labeling systems in the public and private sector. At the same time, there are signs that different national context require different retail and public governance engagement. Research needs to further investigate the relation between public and private governance mechanisms of alternative foods and investigate:

- What is the relation between public and private labeling schemes for alternative food products?
- How does public governance influence the marketing and labeling strategies of retailers?

6.4 Conclusion

A review of academic literature and current initiatives in Europe and Asia indicates that retailers have an important role in the governance of alternative foods. Due to their market and bargaining power they are able to impact producers as well as consumer relations. The role of retail governance in this context has received little attention to date, even though the respective roles of civil society and state actors have been well examined (Padel et al. 2009; Bengtsson, Klintman 2010). Current initiatives in the EU and Asia indicate though that retailers' importance in branding and marketing alternative food products is increasing, especially in contrast to public governance. Moreover, few – if any – comparative studies on retail alternative food governance, which transcend a narrow "North" or "South" focus, have been conducted so far. This is surprising, as current developments in retail markets strongly suggest that the EU and Asia have different needs with regard to standard setting for alternative food products. What is more, there appears to be insufficient focus on the interplay between demand and supply side forces, even

though the examples of organic and GM foods clearly show that the connection between the two matters.

In sum, although several scholars point to the impact of retailers on the shaping of sustainability, their influence on producers and consumers has hardly been researched yet. Studies that foster new insights on the creation of norms by retailers on such societal important issues as sustainability and food safety are needed in this context. Especially the different social and political environments in Europe and Asia require an investigation of retailers' differing role with regard to sustainability issues. It is important to understand what role retailers play in the organic and GM food markets and how they influence the sustainability of the agrifood sector more generally.

7 Gender

Not all issues could be addressed in this first inquiry. Gender, for instance, is a crucial aspect in the global agricultural system, whose interaction with retail governance and sustainability requires further scrutiny. Specifically, there is likely to be male-female variation in terms of (1) needs; (2) roles; (3) access to resources; and (4) participation in decision making processes. In developing countries, for instance, women are responsible for 60-80% of food production. In effect, this means that the working conditions in agriculture and the specific demands placed on standardized export goods are likely to have important gendered effects. Depending on factors such as the respective commodity, cultural norms, ownership structures, and education opportunities, women's agricultural work can be empowering as well as suppressing (e.g. Lebel et al. 2009; Lebel et al. 2008). Not only do women play a key role in food production, but more importantly they are decisive as consumers. As women are often responsible for making choices on food purchasing and preparation, consumption becomes intimately gendered. An example of research in this line of inquiry is the question whether gender matters for the local food movement, i.e. the trend among some consumer groups towards buying food produced in the region (Little et al. 2009). At the same time, women are often underrepresented in the political-administrative system, meaning that they are not equally involved in important decision-making processes. Seeing that both gender and food lie at the core of human existence, then, it appears clear that the relation between the two, retail governance and sustainability will be multi-faceted and complex.

The complexity of the linkages can easily be shown with respect to the issue of climate change. There is an emerging literature that stresses the importance of a gendered perspective on climate change (UNDP 2009; Lambrou, Piana 2006; Nelson et al. 2002). Clearly, the capacity for climate change adaptation and mitigation is unequally distributed across different segments of society. The fundamental assertion of the gender literature is that women, due to factors such as their social role, discrimination and poverty, are affected differently by climate change compared to men. Poor women, for instance, are likely to have limited access to resources, restricted rights, limited mobility and a muted voice in shaping decisions, making them particularly vulnerable (UNDP 2009, p. iii). By highlighting the effects of climate change on the Millennium Development Goals, reports show that climate change will magnify existing patterns of inequality, including gender inequality (Lambrou, Piana 2006; UNDP 2009). For example, because women are responsible for agricultural production in many places, they will be disproportionately affected by droughts, floods, rainfall fluctuations and biodiversity loss.

Similarly, women in sub-Saharan Africa will spend even more time collecting water over huge distances. In spite of the fact that there is a gender dimension to climate change, women appear underrepresented in formal decision making procedures and agreements on environmental governance. As the UNDP reports show, this also holds true for global environmental governance and the associated agreements, treaties, and frameworks (UNDP 2009). Seeing that women appear more vulnerable to climate change on the one hand, but have little say in decision-making on the other, the gender literature urgently calls for a greater inclusion of women. After all, women are not primarily victims, but can also be agents of change, given their unique perspective and experience.

What is the connection between gender and retail governance regarding climate change? At the risk of simplification, women have major responsibilities when it comes to household management and agricultural production (Lambrou, Piana 2006, p. 13). Seeing this, two impact channels appear plausible, one focused on consumption behavior, the other on working conditions in agriculture. Specifically, retailer initiatives aimed at consumer behavior might have gendered effects. For instance, it is an interesting question whether female consumers pay more (or less) attention to environmental labels than male shoppers. Research in this line of inquiry would clarify the effects retail governance has on different consumer segments. This knowledge might be useful for making (retailer) initiatives aimed at changing consumption behavior more effective in practice. Second, retailers' GAP schemes shape the everyday working conditions and practices of farmers and suppliers. Depending on commodity and location, these regulations might have important gender-specific effects. Generally speaking, the interaction between commodity, location, and gender in agricultural production is quite complex, and prohibits generalizations (compare, e.g., a study on Thai fish farming Lebel et al. 2009).

In sum, there is ample reason to believe that there is a major gendered dimension to retail governance and agrifood sustainability. The role of retail governance has not been given any attention so far, however, so that research in this field would be both desirable and innovative.

8 Conclusion

The above discussion aimed to draw attention to relevant sustainability implications of retail governance and the need for more scientific (and political) attention to them. In pursuit of this objective, the discussion also provided first insights on the implications of retail governance for agrifood sustainability. It did so against a background of a dramatic expansion in retail food governance in the last decades, and the interaction of this development with increasing retail power as a result of capital concentration at the retail end of the supply chain as well as the extension of retailers' control from farm to fork. Moreover, the exploration of the implications of retail governance for agrifood sustainability considered the contexts provided by the interaction of private governance with public governance objectives and institutions.

Our discussion focused on four dimensions of sustainability, in particular: sustainable livelihoods, sustainable lifestyles, climate change, and organic as well as genetically modified food products as "alternative" foods. With respect to sustainable livelihoods, the inquiry highlighted the highly ambivalent implications of retail governance for the incomes of (small) farmers, which are yet to be addressed by most retail standards. The discussion identified conditions under which retail standards can work to the benefit of small farmers and thereby delineated an important role for public governance. Finally, the discussion stressed the need for more research on the determinants of retail governance's impact on farmer livelihoods in both developing and developed countries as well as the ways in which public governance can support farmer incomes in the context of expanding retail governance.

With respect to the sustainability of consumer lifestyles, the inquiry showed the interaction between lifestyle marketing and consumer behavior to have a potentially substantial impact on the sustainability of the global agrifood system. Yet, the overall direction of this impact is ambivalent. As much as retailers may promote organic or high quality own brand products, they also may promote sweeter and fattier products (perversely, such products tend to be created particularly for children). In fact, some of the marketing of products as more sustainable has proven to be mere window dressing. Despite the fact that retailers have an important function as a link between consumption and production, little research has been conducted on the overall balance of the promotion of "sustainable lifestyles". Much more research is needed on the link between retail governance of sustainable lifestyles both for developing and developed countries, including both the further development of theoretical frameworks and the gathering of empirical evidence.

The link between retail governance and climate change needs much more attention as well. At this point, we know that an increasing number of retail initiatives address climate change aspects. Some even have ambitious quantitative targets. At the same time, other retail chains are ignoring the issue completely. What are the determinants of these differences in behavior and how can we ensure a comprehensive effort to consider climate change objectives by all retailers? In addition, the main focus of many retail initiatives is on comparatively "easy" measures such as the improvement of the energy efficiency of stores or the transport fleet. The bigger challenges such as the overall transport needs of a globalized agrifood system or the energy intensity of food production often receive little attention. Yet, agrifood data keep reminding us of the large contribution global agrifood production and consumption make to climate change. Given the extent to which retail governance is able to restructure the global agrifood system, a better understanding of how to mobilize its potential contribution to climate change governance is necessary.

In terms of the governance of alternative foods, the discussion has shown the increasing importance of branding and marketing alternative food products as an element of retail governance, especially in contrast to public governance. Given the bargaining power retailers bring to the table they are able to impact producers as well as consumer relations in this context. Again, however, the overall role of retailers in this context has not received sufficient attention in research, even though the respective roles of civil society and state actors have been well examined. Similar to the questions of sustainable livelihoods, sustainable lifestyles, and climate change, moreover, research on retail governance's role with respect to alternative foods will have to pay particular attention to the differing context in developed and developing countries. Current developments in retail markets strongly suggest that the EU and Asia have different needs with regard to standard setting for alternative food products. Likewise, the interplay between demand and supply side forces needs to be better addressed, as the examples of organic and GM foods clearly show that the connection between the two matters.

In sum, the impact of retail governance on agrifood sustainability needs further systematic analysis. After all, retailers have the capacity to influence production conditions, consumer behavior, as well as their own environmental footprint. They are uniquely placed to promote agrifood sustainability across the board. At the same time, retail governance takes place in the context of complex interactions with public governance and societal conditions, including gender issues. In consequence, we urgently need to conduct research on these complex interactions in order to derive balanced assessments of retail governance's impact on agrifood sustainability. Only with a better understanding of these dynamics can we decide if the pursuit of

improvements in the sustainability of the global agrifood system can rely on trust in private voluntary efforts or warrants the governmental imposition of market incentives or regulatory standards.

References

ACP-EU Joint Parliamentary Assembly (2007): Resolution on Poverty Reduction for Small Farmers in ACP Countries - In Particular in the Fruit, Vegetable and Flowers Sectors. Online: ACP-EU/100.011/07/fin.

ActionAid (2005): Power Hungry. Six Reasons to Regulate Global Food Corporations. ActionAid International. London.

Allen, Patricia; Kovach, Martin (2000): The Capitalist Composition of Organic: The Potential of Markets in Fulfilling the Promise of Organic Agriculture. In: Agriculture and Human Values 17(3) p. 221–232.

Barrett (R.; Browne, A. W.; Harris, P. G. C.; Cadoret, K. (2002): Organic Certification and the UK Market: Organic Imports from Developing Countries. In: Food Policy, 27(9), p. 301–318.

Barrett, Hazel R.; Ilbery, Brian W.; Browne, Angela W.; Binns, Tony (1999): Globalization and the Changing Networks of Food Supply: The Importation of Fresh Horticultural Produce from Kenya into the UK. In: Transactions of the Institute of British Geographers, 24(2), p. 159–174.

Bengtsson, Beatrice; Klintman, Mikael (2010): Stakeholder Participation in the EU Governance of GMO in the Food Chain. In: Bäckstrand, Karin; Khan, Jamil; Kronsell, Annica; Lövbrand, Eva (eds.): Environmental Politics and Deliberative Democracy. Examining the Promise of New Modes of Governance. London: Edward Elgar.

Berdegué, Julio A.; Balsevich, Fernando; Flores, Luis; Mainville, Denise Y.; Reardon, Thomas (2003): Case Study: Supermarkets and Quality and Safety Standards for Produce in Latin America. In: Unnevehr, Laurian J. (eds.): Food Safety in Food Security and Food Trade. Washington, DC: IFPRI (Focus).

Blythman, Joanna (2006): Bad Food Britain: How a Nation Ruined It's Appetite. London: Fourth Estate (2006).

Boselie, David; Henson, Spencer; Weatherspoon, Dave (2003): Supermarket Procurement Practices in Developing Countries: Redefining the Roles of the Public and Private Sectors. In: American Journal of Agricultural Economics, 85(5), p. 1155–1161.

Boström, Magnus; Klintman, Mikael (2006): State-centered versus Nonstate-driven Organic Food Standardization: A Comparison of the US and Sweden. In: Agriculture and Human Values, 23(2), p. 163–180.

Boulanger, Pierre H.; Messerlin, Patrick A. (eds.) (2010): 2020 European Agriculture. Challenges and Policies. Washington, DC / Brussels: The German Marshall Fund of the United States (Economic Policy Paper, 10).

Brown, Oli (2005): Supermarkets Buying Power, Global Commodity Chains and Smallholder Farmers in the Developing World. UNDP. (Human Development Report, 2005/4).

Brown, Oli; Sanders, Christina (2007): Supermarket Buying Power. Global Supply Chains and Smallholder Farmers. International Institute for Sustainable Development. Winnipeg, MB.

Buck, Daniel; Getz, Christina; Guthman, Julie (1997): From Farm to Table: The Organic Vegetable Commodity Chain of Northern California. In: Sociologia Ruralis, 37(1), p. 3–20.

Burch, David; Lawrence, Geoffrey (2005): Supermarket Own Brands, Supply Chains and the Transformation of the Agri-Food System. In: International Journal of Sociology of Agriculture and Food, 13(1), p. 1–18.

Burch, David; Lawrence, Geoffrey (eds.) (2007): Supermarkets and Agri-Food Supply Chains. Transformations in the Production and Consumption of Foods. Cheltenham: Edward Elgar.

Busch, Lawrence ([forthcoming]): The Private Governance of Food: Equitable Exchange or Bizarre Bazaar? In: Agriculture and Human Values.

Cadilhon, Jo (2009): The Market for Organic Products in Asia–Pacific. Shanghai. (China BioFach, 26-28 May 2009).

Centre for Sustainable Development (2004): Every little bit helps… Overcoming the Challenges to Researching, Promoting and Implementing Sustainable Lifestyles. Centre for Sustainable Development. University of Westminster.

Ceres (2008): Corporate Governance and Climate Change. Consumer and Technology Companies. Boston, MA.

Clark, Lisa F. (2007): Business as Usual? Corporatization and the Changing Role of Social Reproduction in the Organic Agrofood Sector. In: Studies in Political Economy, 80.

Clarke, Ian (2000): Retail Power, Competition and Local Consumer Choice in the UK Grocery Sector. In: European Journal of Marketing, 34(8), p. 975–1002.

Dawson, John (1995): Food Retailing and the Food Consumer. In: Marshall, David W. (eds.): Food Choice and the Consumer. London: Blackie Academic & Professional, p. 77–104.

Defra (2005): The UK Government Sustainable Development Strategy. London: HMSO Publications.

Defra (2009): GM Crops and Foods. Follow-up to the Food Matters Report by Defra and the FSA. Department for Environment, Food and Rural Affairs. London.

Defra (2010): Food 2030. London: HMSO Publications.

Department of Commerce (2005): National Programme for Organic Production. Ministry of Commerce and Industry, Government of India. New Delhi.

Dixon, Jane (2007): Supermarkets as New Food Authorities. In: Burch, David; Lawrence, Geoffrey (eds.): Supermarkets and Agri-Food Supply Chains. Transformations in the Production and Consumption of Foods. Cheltenham: Edward Elgar, p. 29–50.

Dolan, Catherine; Humphrey, John (2000): Governance and Trade in Fresh Vegetables: The Impact of UK Supermarkets on the African Horticulture Industry. In: Journal of Development Studies, 37(2), p. 147–176.

Dolan, Catherine; Humphrey, John; Harris-Pascal, Carla (1999): Horticulture Commodity Chains: The Impact on the UK market of the African Fresh Vegetable Industry. University of Sussex. (IDS Working Paper, 96).

Duchin, Faye (2005): Sustainable Consumption of Food: A Framework for Analyzing Scenarios about Changes in Diets. In: Journal of Industrial Ecology, 9(1-2), p. 99–114.

Durieu, Xavier (2003): How Europe's Retail Sector Helps Promote Sustainable Production. In: Industry and Environment, 26(1), p. 7–9.

ERRT (2009): Post-Copenhagen Retail 20:20 Vision. European Retail Round Table. Brussels.

European Commission (2004): European Action Plan for Organic Food and Farming. Brussels. (Communication from the Commission to the Council and the European Parliament, COM(2004)415 final).

European Commission (2007): Council Regulation (EC) No 834/2007 of 28 June 2007 on Organic Production and Labelling of Organic Products and Repealing Regulation (EEC) No 2092/91. In: Official Journal of the European Union, 50(189), p. 1–23.

European Commission (2008a): Climate Change and International Security. (Paper from the High Representative and the European Commission to the European Council, S113/08).

European Commission (2008b): Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan. Brussels. (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2008) 397 final).

European Commission (2009): New Challenges for Agricultural Research. Climate Change, Food Security, Rural Development, Agricultural Knowledge Systems. Luxembourg: Office for Official Publications of the European Communities (SCAR Foresight Excercise).

European Commission (2010a): Making Sustainable Consumption and Production a Reality. A Guide for Business and Policy Makers to Life Cycle Thinking and Assessment. Publications Office of the European Union. Luxembourg.

European Commission (2010b): On the Freedom for Member States to Decide on the Cultivation of Genetically Modified Crops. Brussels. (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2010) 380 final).

European Commission (2010c): Retail Forum for Sustainability. http://ec.europa.eu/environment/industry/retail/index_en.htm, accessed 06.07.2010.

European Council (2008): Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan. Council Conclusions. Brussels. (16914/08).

FAO (2006): Food Safety Certification. Food and Agriculture Organization. Rome.

FAO (2008a): Climate Change, Water and Food Security. Technical Background Document from the Expert Consultation Held on 26-28 February 2008. Food and Agriculture Organization. Rome.

FAO (2008b): The State of Food Insecurity in the World. High Food Prices and Food Security – Threats and Opportunities. Food and Agriculture Organization. Rome.

FAWC (2005): Report on the Welfare Implications of Farm Assurance Schemes. Farm Animal Welfare Council. London.

FCRN (2008): Cooking up a Storm. Food, Greenhouse Gas Emissions and our Changing Climate. Food Climate Research Network.

Fearne, Andrew; Hughes, David (1999): Success Factors in the Fresh Produce Supply Chain: Insights from the UK. In: Supply Chain Management, 4(3), p. 120–128.

FFA (2010): Statement on the 3rd Forum for the Future of Agriculture. Media Statement published on 16 March 2010. Forum for the Future of Agriculture. Brussels.

Florentino, Rodolfo F. (2002): The Burden of Obesity in Asia. Challenges in Assessment, Prevention and Management. In: Asia Pacific Journal of Clinical Nutrition, 11(8), p. 676–680.

Flynn, Andrew; Marsden, Terry; Smith, Everard (2003): Food Regulation and Retailing in a New Institutional Context. In: The Political Quarterly, 74(1), p. 38–46.

Fold, Niels; Gough, Katherine V. (2008): From Smallholders to Transnationals: The Impact of Changing Consumer Preferences in the EU on Ghana's Pineapple Sector. In: Geoforum, 39(5), p. 1687–1697.

Foodwatch (2010): Ampelkennzeichnung. Nährwert-Ampel: Damit Lebensmittel Farbe bekennen. http://foodwatch.de/kampagnen__themen/ampelkennzeichnung/index_ger.html, accessed 06.07.2010.

Fritschel, Heidi (2003): Will Supermarkets be Super for Small Farmers? In: IFPRI Forum, p. 10–12.

Fuchs, Doris (2005): Commanding Heights? The Strength and Fragility of Business Power in Global Politics. In: Millennium - Journal of International Studies, 33 (3), p. 771–801.

Fuchs, Doris (2006): Global Governance. An International Relations Perspective on Tropical Forests. In: Spray, Sharon; Moran, Michael (eds.): Tropical Deforestation. A Multi-Disciplinary Approach. New York: Rowman & Littlefield (Exploring Environmental Challenges), p. 129–154.

Fuchs, Doris; Boll, Frederike (forthcoming): Private Food Governance and Climate Change. In: Ronit, Karsten (eds.): Private Voluntary Programs in Global Climate Policy. Pitfalls and Potentials.

Fuchs, Doris; Kalfagianni, Agni (2009): Discursive Power as a Source of Legitimation in Food Retail Governance. In: The International Review of Retail, Distribution and Consumer Research, 19 (5), p. 553–570.

Fuchs, Doris; Kalfagianni, Agni (2010a): The Causes and Consequences of Private Food Governance. In: Business and Politics, 12 (3).

Fuchs, Doris; Kalfagianni, Agni (2010b): The Democratic Legitimacy of Private Authority in the Food Chain. In: Porter, Tony; Ronit, Karsten (eds.): The Challenges of Global Business Authority. Democratic Renewal, Stalemate, or Decay? Albany, NY: SUNY Press, p. 65–88.

Fuchs, Doris; Kalfagianni, Agni (forthcoming): Global Gap. In: Reed, Darryl (eds.): Non-State Regulation and Development.

Fuchs, Doris; Kalfagianni, Agni; Sattelberger, Julia (2010): The Democratic Legitimacy of TNCs in Global Governance. In: Erman, Eva; Uhlin, Anders (eds.): Legitimacy Beyond the State? Re-examining the Democratic Credentials of Transnational Actors. New York: Palgrave Macmillan, p. 41-63.

Fuchs, Doris; Kalfagianni, Agni; Arentsen, Maarten (2009): Retail Power, Private Standards, and Sustainability in the Global Food System. In: Clapp, Jennifer; Fuchs, Doris (eds.): Corporate Power in Global Agrifood Governance. Cambridge, Mass.: MIT Press, p. 29–59.

Gibbon, Peter (2003): Value-Chain Governance, Public Regulation and Entry Barriers in the Global Fresh Fruit and Vegetable Chain into the EU. In: Development Policy Review, 21 (5-6), p. 615–625.

Graz, Jean-Christophe; Nölke, Andreas (eds.) (2008): Transnational Private Governance and its Limits. London: Routledge (Routledge/ECPR studies in European political science, 51).

Greenpeace (2008): Cool Farming. Climate Impacts of Agriculture and Mitigation Potential. Wtih Jessica Bellarby, Bente Foereid und Astley Hastings et al. Greenpeace International. Amsterdam.

Gruère, Guillaume P.; Rao, p. R. (2007): A Review of International Labeling Policies of Genetically Modified Food to Evaluate India's Proposed Rule. In: AgBioForum, 10 (1), p. 51–64.

Hatanaka, Maki; Bain, Carmen; Busch, Lawrence (2005): Third-Party Certification in the Global Agrifood System. In: Food Policy, 30 (3), p. 354–369.

Henson, Spencer; Humphrey, John (2009): The Impacts of Private Food Safety Standards on the Food Chain and on Public Standard-Setting Processes. Joint FAO/WHO Food Standards Programme, Codex Alimentarius Commission. (ALINORM 09/32/9D-Part II).

Henson, Spencer; Humphrey John (2010): Understanding the Complexities of Private Standards in Global Agri-Food Chains as They Impact Developing Countries. In: Journal of Development Studies 46(9), p. 1628–1646.

Henson, Spencer; Reardon, Thomas (2005): Private Agri-Food Standards. Implications for Food Policy and the Agri-Food System. In: Food Policy, 30 (3), p. 241–253.

Hofer, Karin (2004): Labelling of Organic Food Products. In: Mol, Arthur P. J.; Lauber, Volkmar; Liefferink, Duncan (eds.): The Voluntary Approach to Environmental Policy. Joint Environmental Policy-making in Europe. Oxford: Oxford Univ. Press, p. 156–191.

Hoffman, Andrew J.; Woody, John G. (2008): Climate Change. What's Your Business Strategy? Cambridge, MA: HBS Press.

Horne, Ralph E. (2009): Limits to Labels: The Role of Eco-labels in the Assessment of Product Sustainability and Routes to Sustainable Consumption. In: International Journal of Consumer Studies, 33 (2), p. 175–182.

Huber, Beate; Schmid, Otto; Kilcher, Lukas (2008): Standards and Regulation. In: Willer, Helga; Yussefi-Menzler, Minou; Sorensen, Neil (eds.): The World of Organic Agriculture. Statistics and Emerging Trends 2008. Bonn, Frick, London: IFOAM; FiBL; Earthscan, p. 59–70.

Humphrey, John (2006): Policy Implications of Trends in Agribusiness Value Chains. In: European Journal of Development Research, 18 (4), p. 572–592.

IATP (2007): The Common Agricultural Policy. A Brief Introduction. Unter Mitarbeit von Céline Delayen. Institute for Agriculture and Trade Policy. Minneapolis, MN.

IEEP (2002): The Common Agricultural Policy. How the CAP Operates, the Key Commodities, Competitors and Markets for the Euorpean Union. UK Food Group; Sustain. (Background Briefing, 1).

IFPRI (2009): Agriculture and Climate Change. An Agenda for Negotiation in Copenhagen. Herausgegeben von Gerald C. Nelson. International Food Policy Research Institute. Washington, DC.

IOTF (2005): EU Platform Briefing Paper. International Obesity Task Force. Brussels.

IPCC (2007): Summary for Policymakers. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, UK.

Jones, Peter; Clarke-Hill, Colin; Hillier, David; Shears, Peter (2000): Food Retailers' Responses to the GM Controversy within the UK. In: British Food Journal, 102 (5/6), p. 441–448.

Jones, Peter; Clarke-Hill, Colin; Shears, Peter; Hillier, David (2001): Retailing Organic Foods. In: British Food Journal, 103 (5), p. 358–365.

Jones, Peter; Comfort, Daphne; Hillier, David; Eastwood, Ian (2005): Retailers and Sustainable Development in the UK. In: International Journal of Retail & Distribution Management, 33 (3), p. 207–214.

Kalaitzandonakes, Nicholas; Bijman, Jos (2003): Who is Driving Biotechnology Acceptance? In: Nature Biotechnology, 21 (4), p. 366–369.

Kinsey, Jean D. (1998): Concentration of Ownership in Food Retailing: A Review of the Evidence about Consumer Impact. The Retail Food Industry Center. University of Minnesota. (Working Paper, 4).

Kledal, Paul Rye (2005): Growing Bargain Power of Supermarkets Presses Organic Vegetable Producers. In: Newsletter from Danish Research Centre for Organic Farming (3).

Klonsky, Karen (2000): Forces Impacting the Production of Organic Foods. In: Agriculture and Human Values, 17 (3), p. 233–243.

Konefal, Jason; Mascarenhas, Michael; Hatanaka, Maki (2005): Governance in the Global Agro-food System. Backlighting the Role of Transnational Supermarket Chains. In: Agriculture and Human Values, 22 (3), p. 291–302.

Lambrou, Yianna; Piana, Grazia (2006): Gender. The Missing Component of the Response to Climate Change. FAO. Rome.

Lebel, Louis; Lebel, Phimphakan; Garden, Po; Giap, Dao Huy; Khrutmuang, Supaporn; Nakayama, Sachiko (2008): Places, Chains, and Plates. Governing Transitions in the Shrimp Aquaculture Production-Consumption System. In: Globalizations, 5 (2), p. 211–226.

Lebel, Phimphakan; Chaibu, P.; Lebel, Louis (2009): Women Farm Fish. Gender and Commercial Fish Cage Culture on the Upper Ping River, Northern Thailand. In: Gender, Technology and Development, 13 (2), p. 199–224.

Little, Jo; Ilbery Brian; Watts, David (2009): Gender, Consumption and the Relocalisation of Food. A Research Agenda. In: Sociologia Ruralis, 49 (3), p. 201–217.

Lockie, Stewart; Lawrence, Geoffrey; Lyons, Kristen; Grice, Janet (2005): Factors Underlying Support or Opposition to Biotechnology among Australian Food Consumers and Implications for Retailer-led Food Regulation. In: Food Policy, 30 (4), p. 399–418.

Lyons, Kristen (2007): Supermarkets as Organic Retailers: Impacts for the Australian Organic Sector. In: Burch, David; Lawrence, Geoffrey (eds.): Supermarkets and Agri-Food Supply Chains. Transformations in the Production and Consumption of Foods. Cheltenham: Edward Elgar, p. 154–172.

Maniatis, Michael (2001): Individualization: Plant a Tree, Buy a Bike, Save the World? In: Global Environmental Politics, 1, p. 31–52.

McEachern, Morven; Warnaby, Gary G. (2004): Retail Quality Assurance Labels as a Strategic Marketing Communication Mechanism for Fresh Meat. In: The International Review of Retail, Distribution and Consumer Research, 14 (2), p. 255–271.

Minten, Bart; Randrianarison Lalaina; Swinnen, Johan F. M. (2009): Global Retail Chains and Poor Farmers. Evidence from Madagascar. In: World Development, 37 (11), p. 1728–1741.

Miyata, Sachiko; Minot, Nicholas; Hu, Dinghuan (2009): Impact of Contract Farming on Income. Linking Small Farmers, Packers, and Supermarkets in China. In: World Development, 37 (11), p. 1781–1790.

Morgan, Kevin; Marsden, Terry; Murdoch, Jonathan (2006): Worlds of Food. Place, Power, and Provenance in the Food Chain. Oxford, UK: Oxford Univ. Press.

Nadvi, Khalid; Wältring, Frank (2002): Making Sense of Global Standards. Institut für Entwicklung und Frieden. Duisburg. (INEF Report, 58/2002).

Nagaraj, K. (2008): Farmers' Suicides in India. Magnitudes, Trends and Spatial Patterns. Madras Institute of Development Studies.

Nelson, Gerald C. (2010): Agriculture and Climate Change. In: Boulanger, Pierre H.; Messerlin, Patrick A. (eds.): 2020 European Agriculture. Challenges and Policies. Washington, DC / Brussels: The German Marshall Fund of the United States (Economic Policy Paper, 10), p. 11–21.

Nelson, Valerie; Meadows, Kate; Cannon, Terry; Morton, John; Martin, Adrienne (2002): Uncertain Predictions, Invisible Impacts, and the Need to Mainstream Gender in Climate Change Adaptations. In: Gender and Development, 10 (2), p. 51–59.

Organic Monitor (2006): The European Market For Organic Food & Drink. London.

Padel, Susanne; Röcklinsberg, Helena; Schmid, Otto (2009): The Implementation of Organic Principles and Values in the European Regulation for Organic Food. Development of Organic Farming Policy in Europe. In: Food Policy, 34 (3), p. 245–251.

PCF World Forum (2010): International Developments in Product Carbon Footprinting and Carbon Labelling. Berlin. (PCF World Forum News, 2).

Pearce, Richard; Hansson, Maria (2000): Retailing and Risk Society: Genetically Modified Food. In: International Journal of Retail & Distribution Management, 28 (11), p. 450–459.

Perez-Aleman, Paola; Sandilands, Marion (2008): Building Value at the Top and the Bottom of the Global Supply Chain: MNC-NGO Partnerships. In: California Management Review, 51 (1), p. 24–49.

PlanetRetail (2006): Global Retail Concentration.

Pollan, Michael (2006): The Omnivore's Dilemma: A Natural History of Four Meals: Univ. of California Press.

Popkin, Barry M. (2002): An Overview on the Nutrition Transition and its Health Implications. The Bellagio Meeting. In: Public Health Nutrition, 5 (1A), p. 93–103.

Raynolds, Laura T. (2004): The Globalization of Organic Agro-Food Networks. In: World Development, 32 (5), p. 725–743.

Reardon, Thomas; Barrett, Christopher B.; Berdegué, Julio A.; Swinnen, Johan F. M. (2009): Agrifood Industry Transformation and Small Farmers in Developing Countries. In: World Development, 37 (11), p. 1717–1727.

Reardon, Thomas; Timmer, Peter; Berdegue, Julio (2004): The Rapid Rise of Supermarkets in Developing Countries. Induced Organizational, Institutional, and Technological Change in Agrifood Systems. In: The Electronic Journal of Agricultural and Development Economics, 1 (2), p. 168–183.

Retail Forum (2009): Retailers' Environmental Action Programme. Terms of Reference. Retail Forum for Sustainability. Brussels.

Schlippenbach, Vanessa von; Teichmann, Isabel (2009): Quality Standards for Fruits and Vegetables: Help or Hindrance for Rural Development? In: DIW Berlin Weekly Report, 5 (21).

Sklair, Leslie (2002): The Transnational Capital Class and Global Politics. Deconstructing the Corporate-State Connection. In: International Political Science Review, 23 (2), p. 159–174.

Takane, Tsutomu (2004): Smallholders and Nontraditional Exports Under Economic Liberalization: The Case of Pineapples in Ghana. In: African Study Monographs, 25 (1), p. 29–43.

Tallontire, Anne; Vorley, Bill (2005): Achieving Fairness in Trading between Supermarkets and Their Agrifood Supply Chains. UK Food Group.

Thanassoulis, John (2008): Europe's Farmers do not Reap the Benefits of Higher Food Prices. In: European Voice, 13.06.2008.

Tukker, Arnold; Bausch-Goldbohm, Sandra; Verheijden, Marieke; Koning, Arjan de; Kleijn, René; Wolf, Oliver; Domínguez, Ignacio Pérez (2009): Environmental Impacts of Diet Changes in the EU. Publications Office of the European Union. Luxembourg. (JRC Scientific and Technical Reports, EUR 23783).

Uhlig, Robert; Foster, Peter (2002): Angry Farmers Set their Sights on the Supermarkets. In: The Daily Telegraph, 19.09.2002.

UNDP (2009): Resource Guide on Gender and Climate Change. New York: United Nations Development Programme.

UNEP (2002): Background Paper for the Ministerial Level Consultations: Promoting Sustainable Consumption and Production Patterns. Governing Council of the United Nations Environment Program. Nairobi. (UNEP/GC.22/8/Add.2).

UNEP (2005): Introduction to Sustainable Consumption in Europe and Asia. Background Paper for SC.Asia Cross-Learning Seminar. Manila.

UNEP (2006a): Greening Shops and Saving Costs: A Practical Guide for Retailers. Federal Ministy for the Environment, Nature Conservation and Nuclear Safety. Singapore.

UNEP (2006b): SCP Roundtables in China and India. An Overview of Sustainable Consumption and Production Challenges and Opportunities. Paris. (DTI/0918/PA).

UNEP (2009): Meeting Report. 3rd Chinese Roundtable on Sustainable Consumption and Production (CRSCP), 14 November 2009, Beijing.

UNEP; Consumers International (2004): Tracking Progress: Implementing Sustainable Consumption Policies. A Global Review of Implementation of the United Nations Guidelines for Consumer Protection. SCP Publications.

Vorley, Bill (2003): Food, Inc. Corporate Concentration from Farm to Consumer. UK Food Group.

Vorley, Bill; Fox, Tom (2004): Global Food Chains. Constraints and Opportunities for Smallholders. Prepared for the OECD DAC POVNET Agriculture and Pro-Poor Growth Task Team, Helsinki Workshop, 17-18 June 2004. International Institute for Environment and Development. London.

Wai, Ong Kung (2008): Organic Asia 2007. In: Willer, Helga; Yussefi-Menzler, Minou; Sorensen, Neil (eds.): The World of Organic Agriculture. Statistics and Emerging Trends 2008. Bonn, Frick, London: IFOAM; FiBL; Earthscan, p. 102–110.

Willer, Helga; Yussefi-Menzler, Minou; Sorensen, Neil (eds.) (2008): The World of Organic Agriculture. Statistics and Emerging Trends 2008. Bonn, Frick, London: IFOAM; FiBL; Earthscan.

Winter, Thorsten (2010): Gutes aus der Region in vielen Regalen. In: Frankfurter Allgemeine Zeitung, Ausgabe 221, 23.09.2010, p. 50.

World Bank (2005): Challenges and Opportunities Associated with International Agro-Food Standards. Synthesis Report. Poverty Reduction & Economic Management Trade Unit and Agriculture and Rural Development Department. Washington, DC. (Report, 31207).